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Commercial News USA

New Products and Trade Information

**Printing and Graphic Arts
Industry Highlights**

March/April 1978



U.S. DEPARTMENT OF COMMERCE
Industry and Trade Administration
Washington, D.C. 20230

PRINTING AND GRAPHIC ARTS
EQUIPMENT IN THE U.S.



INDUSTRY HIGHLIGHTS

- * *Composition and Copy Preparation*
- * *Imaging Systems Utilizing "Nonimpact" or Plateless Printing*
- * *Elimination of Press Proofing*
- * *Accelerated Growth of In-Plant Printing Facilities*
- * *Other major trends*

(See Feature Article)

FOREWORD

The purpose of the *COMMERCIAL NEWS USA* magazine is to provide pertinent U.S. commercial information for reprinting in some 70 Posts' Commercial Newsletters which are disseminated to over 100,000 foreign business officials, government representatives and other prospective buyers. This magazine is specifically designed to foster and promote U.S. commercial interest in foreign markets. In addition, it informs the U.S. Foreign Service of new Commerce trade promotion program and policy developments.

The worldwide Commercial Newsletter program plays an important role in expanding U.S. exports all over the world by publicizing information concerning new American products and technological developments and U.S. Commercial exhibitions at home and abroad. Significant sales of "New Products U.S.A." further the objective of establishing the image of the United States as a first source of quality equipment and advanced technology. In addition, Commercial Newsletters promote U.S. investment and licensing abroad.

The material in "Commercial News USA" may be reproduced freely in foreign countries without specific permission. We urge both USIS Public Affairs Officers and Post Commercial Officers to widely publicize the new product information abroad through Commercial Newsletters and appropriate private media such as foreign trade journals, newspapers, etc. Posts should also retain copies in overseas Commercial Libraries for reference purposes since this magazine is not regularly available to U.S. or foreign companies on a subscription or gratis basis.

This information was compiled in cooperation with various government and industry officials. Every effort has been made to ensure that the data contained in this publication is correct. However, no responsibility can be assumed by the U.S. Government for the accuracy of dates or the outcome of any transaction with any person or firm mentioned herein.

Suggestions or comments from the field regarding this publication are welcome.

WRITE: *Commercial News USA*, Office of International Marketing, Bureau of Export Development, Industry and Trade Administration, U.S. Department of Commerce, Washington, D.C. 20230; Telephone (AC) 202/377-5783.

EDITOR: CONSTANCE L. WHITE

TABLE OF CONTENTS

Number 32

FEATURE

	Page
<i>Printing, Graphic Arts Equipment Industry Highlights.....</i>	1

PRINTING AND GRAPHIC ARTS

<i>Overseas Exhibition Calendar.....</i>	5
--	---

U.S. GOVERNMENT SPONSORED EVENTS OVERSEAS

<i>Calendar.....</i>	6
----------------------	---

MAJOR PRODUCT EXHIBITIONS IN THE U.S.

<i>Calendar.....</i>	6
----------------------	---

PRINTING, GRAPHIC ARTS EQUIPMENT AND SUPPLIES - NEW PRODUCTS

<i>Prepress Equipment.....</i>	7
--------------------------------	---

<i>Pressroom Equipment.....</i>	8
---------------------------------	---

<i>Bindery and Finishing Equipment.....</i>	10
---	----

<i>Printing Supplies and Accessories.....</i>	12
---	----

<i>Equipment and Supplies for Drafting and Other Graphic Arts.....</i>	14
--	----

U.S. TRADE ASSOCIATIONS AND JOURNALS.....	15
---	----

NEW PRODUCTS U.S.A.

<i>Agricultural Machinery and Equipment.....</i>	17
--	----

<i>Audio - Visual.....</i>	18
----------------------------	----

<i>Automotive.....</i>	19
------------------------	----

<i>Building, Construction and Materials Handling.....</i>	20
---	----

<i>Business and Office Equipment.....</i>	22
---	----

<i>Chemical and Petrochemical Industries.....</i>	23
---	----

<i>Computers and Peripherals.....</i>	23
---------------------------------------	----

<i>Consumer Goods.....</i>	25
----------------------------	----

TABLE OF CONTENTS (Cont'd)

	Page
<i>Energy: Electric and Other (Machinery & Equipment for Production and Distribution)</i>	28
<i>Electronic Components</i>	28
<i>General Industrial Machinery and Equipment</i>	29
<i>Healthcare Industries</i>	29
<i>Housewares</i>	32
<i>Laboratory and Scientific Instruments</i>	34
<i>Marine and Related Equipment</i>	34
<i>Metalworking and Finishing</i>	35
<i>Production Specialized Machinery and Equipment</i>	35
<i>Safety and Security Equipment</i>	36
<i>Sports, Recreation and Hobbies</i>	37
LICENSING AND INVESTMENT PROPOSALS.....	40

EDITOR'S NOTE: "Commercial News USA" was formerly titled "Commercial News for the Foreign Service." There is no substantive change in content.



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PRINTING, GRAPHIC ARTS EQUIPMENT

Industry Highlights

While it is often difficult to forecast the future, The National Printing Equipment Association, Inc., in cooperation with the Research and Engineering Council of the Graphic Arts Industry, Inc., has taken a close look at critical trends affecting the industry. It should be understood that there might be any number of trends which are taking place in the graphic arts industry, but we have confined our efforts to discussing those which are felt to be the most significant.

COMPOSITION AND COPY PREPARATION

The trend of printers providing full copy preparation has closely paralleled the growth of lithography. It appeared first in the offset duplicator market, with strike-on paper masters produced on an office typewriter, closely followed by camera platemakers which would accept both typewritten copy and graphics. While this was happening the use of computers was accelerating, their cost decreasing, and their capabilities expanding. The development of software programs for hyphenation and justification was the key breakthrough to allow the computer to perform all that the Linotype operator had done in the past. Optical character recognition (OCR) scanners now afford new and rapid means to input text to a computer without re-keyboarding the author's words. Video editing terminals now allow editors to correct, compose and even paginate without the use of intermediate galleys and paper proofs. New low-cost "word processing systems" allow versatile typographic quality output in any medium or large size office.

The trend is already established in other fields. Consider that non-daily newspaper publishers have for some time been supplying their printers with camera-ready copy. This includes full page paste-ups incorporating texts, halftones and advertising. The printer has been making a final negative for plate-making, but there is no reason that this cannot be done by the publisher. Industrial and business in-plant facilities have the same capabilities.

The reasons for this trend are numerous: the source producer knows his material best. He knows the urgency or flexibility of his timetable, and the amount of cost which the job will justify. Furthermore, his costs are lower because he employs office workers instead of craft unions.

The effect of this trend will be to reduce the role of independent typesetting firms, and increase the size of in-plant printing departments. Printers themselves must be prepared to accept a new kind of copy input in the form of magnetic tape from their customers.

This trend is consistent with other trends in the industry toward lower cost typesetting equipment, mini-computers, microprocessors, and nonimpact printing.

IMAGING SYSTEMS UTILIZING "NONIMPACT" OR PLATELESS PRINTING

Imaging systems utilizing "Nonimpact" or plateless printing give the printer the capability of introducing variable and personalized information into print, and are now a viable part of the graphic arts. Fully integrated systems, which take

original copy or electronic data directly into them and deliver a printed, collated, and bound product, are technically feasible today. Those printers whose business is, in whole or part, derived from this "on demand" and mostly short run particularized printing will be forced to adopt these systems or fail to compete successfully for this class of work.

These techniques, although primarily used for specialized line work today, will gradually enter fields such as limited edition paperback books within the next few years. The lure of "on demand" and other targeted areas of printing offers the publisher the advantage of smaller investments in paper, labor and warehousing, and for tomorrow's job printer it may offer the only avenue for survival. Ink-jet printing systems have gained high visibility for their practical applications and for new markets such as business forms, credit card billing, form letter printing, parts lists, labels, containers, packages, and of course, for their potential for direct output at high speeds for computer printouts. In a number of installations there has been a simultaneous and successful coupling of variable information with orthodox printing technologies. Plateless systems, usually electrostatic, are providing alternate methods for the production of end products with many advantages such as quick turn around times, low capital investment requirements, minimal end product stocking and warehousing, flexibility, convenience, ease of operation, and some capability for custom-made publications. Certainly with these advantages, plus the lowered cost of memory, the age of plateless imaging is here and its expansion and growth is assured. The only questions remaining are how soon and how extensive this growth will be.

No shock is anticipated on quality reproduction printing for the immediate future nor are any major inroads expected in the area of four-color high quality advertising or printing. The major inroads will remain in line work and specialized printing.

ELIMINATION OF PRESS PROOFING

This well established trend is increasing its pace of growth since the printing industry continues to need some kind of pre-production proofing.

For many years, press proofs were the only means available to try to fulfill these purposes. However, since they are subject to numerous uncontrolled variables they have always been suspect to some degree and are often the source of serious misunderstandings and misjudgments.

Variations in press proofs are inevitable due to the interactions of environment, press, paper, ink and people all of which are changeable. These things make it almost impossible to fix responsibility for unacceptable production jobs which do not match the proofs. In addition, the cost of press proofs in labor and materials has long been a concern and continues to escalate with each new labor contract and wave of inflation to such an extent that today only a few customers can afford to pay for them. Also many jobs cannot tolerate the relatively long time required to produce a press proof.

Because of these things, press proofing has been a natural candidate for replacement by better alternatives. However, it will probably never disappear completely because some customers will continue to believe they must have ink on paper proofs. These conditions have established the need and provided the incentive for suppliers to develop more reliable, nonemotional, lower-skilled,

faster and less costly system. Much time and money has been used in this effort and there have been some failures.

More recently new, off-press, rapid, easy to use, single sheet proofing systems have been developed and are widely used for control of pre-press and pressroom functions. Colors can be selected to match any desired ink for both hue and density and both positive and negative working varieties are available. The usual daily variables of ink, paper, press and pressroom conditions have been eliminated so that the reliability and reproducibility are superior to that of press proofs and the cost and time requirements are greatly reduced.

Some interpretation in relation to production press runs is still required to allow for local idiosyncrasies. However, as users improve their procedures and tighten process controls, reliability of these single layer off-press proofs has been firmly established and they are being accepted by printing buyers in lieu of press proofs.

This trend to new off-press proofing systems is in full swing for publication and commercial offset printing and a similar movement has started in gravure and flexo printing. Package printing has special needs involving non-process colors, unusual solid colors and a variety of substrates and its use of off-press proofing is moving more slowly.

ACCELERATED GROWTH OF IN-PLANT PRINTING FACILITIES

The future growth of traditional commercial printing has been in the past--and will be in the future--limited by this trend, since many manufacturing concerns, insurance companies, government agencies, banks universities, schools, and business firms of infinite variety have their own in-plant printing facilities. These may range from a minimum of a single press and full-time operator to a sophisticated organization with many presses, large and small, complete with pre-press and finishing capability, and a sizable number of employees. Generally accepted statistics state that in 1976, there were approximately 65,000 in-plant printing departments, over half of which are located in the manufacturing industries sector. It is estimated that by 1980, there will be over 80,000 such departments. About 75 percent of the total are small departments with one to four employees.

By comparison, the printing industry (not including newspapers or publishers) is estimated to consist of some 35,000 establishments, or slightly less than half the total number of in-plant departments. Little growth in the commercial sector is predicted over the next five years. Approximately 80 percent of these establishments employ fewer than twenty employees. As might be expected though, the volume of work done by both the larger in-plant departments and printing establishments is considerably greater than that produced by the vast number of smaller departments and establishments. The commercial printer today is being left to print the more sophisticated pieces while the in-plant printer is doing more and more of the short run single color jobs.

The primary reason is almost always--cost. A second reason is--control. Here, we are talking about fast turn-around time, quality (commensurate with need), customized rapid service and security of confidentiality. A third reason is--new technology. This has provided simplified and greatly improved systems and

techniques. They apply across the complete spectrum from composition and copy preparation through platemaking to presses which automatically change plates at the completion of the desired run length and deliver collated sets of finished jobs.

In the area of cost, it is generally accepted that the in-plant department has lower labor costs and is free to adopt equipment and methods that reduce operator requirements and skills. Similarly, the adoption of this new technology leads to increased productivity. The in-plant department has no salesman costs associated with the work nor does it have direct purchasing costs for printing. Associated costs of composition and platemaking are also reduced with the number of new systems on the market. Both the in-plant printing department and the traditional printer incur costs for floor space, administration, maintenance, capital equipment and materials. While important, the decisions affecting these costs are so varied and dependent on individual situations that no clear-cut edge or precise advantage can be allotted to either. The major reason influencing the continued growth of in-plant printing is the availability of new technology because it reinforces the reasons of "why" the in-plant facility came into being.

Other trends include.....

Micrographics--The growth rate of the printing industry is about 3 1/2 percent annually, and it is approximately 100 times larger than the micrographics industry. However, during the next five years, printing will lose 20-30 percent of its business in industrial catalogs, directories, and business forms to the new technology.

Gravure--Breakthroughs in the gravure industry could accelerate its growth from a projected five-year compounded rate of 15 percent, especially if a wraparound plate method permitting last-minute changes became available. Direct color engraving, new developments in previewing for programming color and, perhaps, electron-beam engraving are all promising solutions to gravure's problems.

Lasers--Scanners now account for about 25 percent of today's color separation work. The problem that laser scanner manufacturers and suppliers of photo-sensitive materials have been facing is that common lithographic plates and photo-resists must be used with very inefficient and high-powered ultraviolet lasers. The argon laser is a promising alternative.

Film - New film just introduced in conjunction with the laser-oriented Komstar computer output microfilmer, does not require a darkroom or machine processor or processing chemicals. This film, developed during a five-second pass over a heated drum, now brings the graphic arts a step closer to dry-process films.

Phototypesetting--This has been the most visible trend of the past ten years in the publishing field. There are approximately 40,000 phototypesetting units in the U.S. today, and this figure should double during the next three years.

One thing that is occurring is that offset is moving into newspaper publishing. About 90 percent of the weekly newspapers (there are close to 8,000 weekly newspapers in this country) are being printed today by web offset. As for the dailies, about 68.4 percent of the daily newspapers were printed by web offset in 1976. What is interesting here is that the 68 percent figure represents

offset in 1976. What is interesting here is that the 68 percent figure represents less than 30 percent of the total circulation of daily newspapers. So it is still the small and medium-sized newspapers, for the most part that are converting.

Over the next few years, web offset will account for close to 50 percent of total daily circulation. Many of the remaining newspapers will convert to direct lithography or shallow relief photopolymer letterpress plates, but the largest dailies will continue to use metal plates. Although flexographic printing holds some promise in this sector, to date the flexographic printing of newspapers has remained in the experimental stage.

* *

PRINTING AND GRAPHIC ARTS

Overseas Exhibitions

CALENDAR

<u>DATE</u>	<u>EVENT</u>	<u>LOCATION</u>
June 6-8	Int'l Word Processing Exhib. and Conference	London, England
Aug 21-26	Mexprint Int'l	Mexico City, Mexico
Sept 25 Oct 1	Int'l Graphic Arts Packaging Printing Equip Trade Fair	Sao Paulo, Brazil
Oct 22-25	Graphic Trade '78	Toronto, Canada
<u>1979</u>		
March 3-12	Printing Packing Machinery Fair (Graphispack)	Barcelona, Spain
April	Nat'l Printing Machinery Exhib. Birmingham	Birmingham, England
October	Modern Graphic Machinery Trade Exhib.	Essen, Germany

(The above exhibition information is subject to change without prior notice.)

U.S. GOVERNMENT SPONSORED EVENTS OVERSEAS

CALENDAR

Further information on the events listed below may be obtained by contacting the nearest U.S. Commerce District Office or by writing the Office of International Marketing, Room 4012, Bureau of International Commerce, U.S. Department of Commerce, Washington, D.C. 20230. If overseas, contact the nearest U.S. Embassy. The listed events/dates are subject to change or cancellation without prior notice.

PRINTING AND GRAPHIC ARTS EQUIPMENT EVENTS

TRADE FAIRS:

Graphic Industries Equipment (Solo)	Caracas, Venezuela	June 1978
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TRADE CENTER EXHIBITIONS:

Graphic Industries Equipment	Taipei, Taiwan	November 1978
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Graphic Industries Equipment	Tokyo, Japan	March 1979
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Graphic Industries Equipment	Milan, Italy (Offsite)	May 1979
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TRADE MISSION:

U.S. Trade Mission/Seminar Graphic Industries	Czechoslovakia/ Hungary/Poland	March 1979
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CATALOG SHOW:

Graphic Industries Equipment	India (4 stops)	April 1978
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MAJOR PRODUCT EXHIBITIONS IN THE U.S.

GRAPH-EXPO '78	New York Coliseum New York, New York	October 16-19
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GRAPH ARTS	Charlotte, North Carolina	March 1979
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PRINT 80	Chicago, Illinois	April 12-19, 1980
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PRINTING, GRAPHIC ARTS EQUIPMENT AND SUPPLIES

NEW PRODUCTS

PREPRESS EQUIPMENT



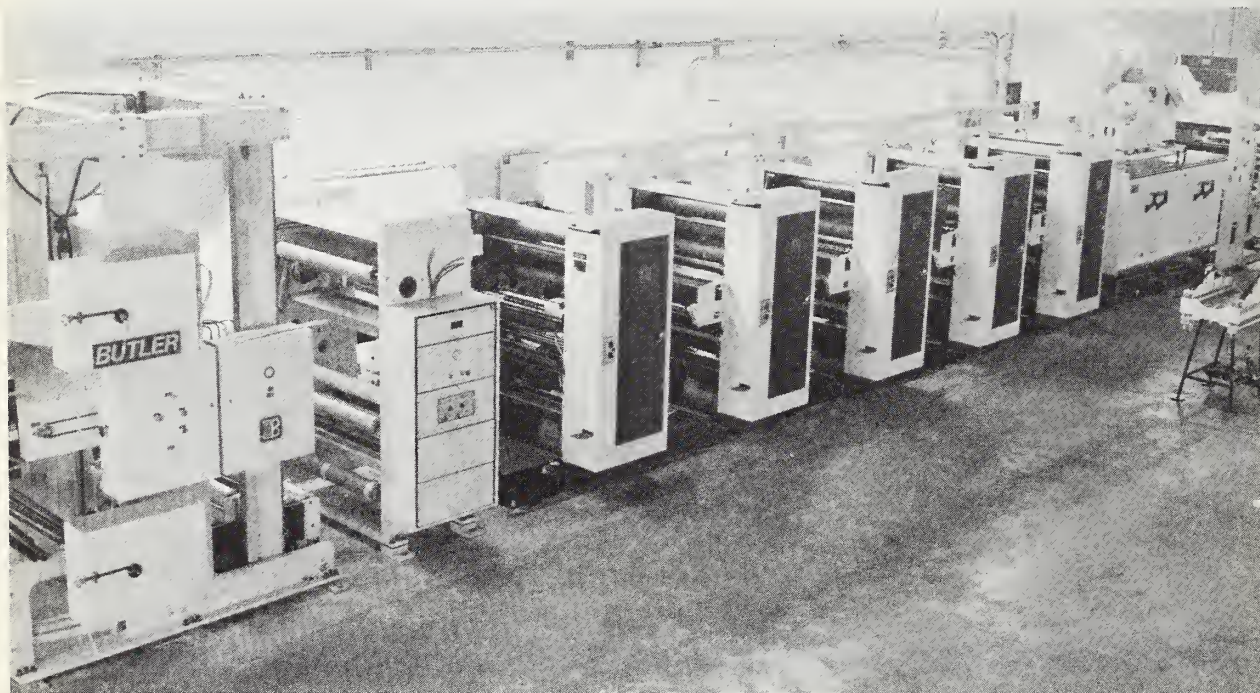
HIGH-SPEED, DRY-FILM PLATEMAKING SYSTEM -- The "Pyrofax Imaging System" is designed to lower printing costs by increasing the speed of platemaking (a camera-ready 38 in (97 cm) plate in under three minutes) and by reducing the equipment and supplies needed with conventional lithography. A new 85-line halftone screen capability adapts the unit for most daily and weekly newspapers. Priced from \$60,000 to \$90,000. WRITE: B.L. Shely, 3M Company, Dept. CN, P.O. Box 33800, 3M Center, St. Paul, Minnesota 55101 U.S.A.

LASER PLATEMAKING SYSTEM -- "LogEscan" is a modern version of the graphics arts camera which is designed for the high production printing requirements of daily newspapers and commercial printing plants. This large format laser scanning system prepares offset and Di-litho plates directly from paste-up copy, bypassing intermediate film steps. Price is \$150,000. WRITE: J. Luczak, Log-Etronics, Inc., Dept. CN, 7001 Loisdale Road, Springfield, Virginia 22150 U.S.A.

PHOTOTYPESETTING EQUIPMENT -- The "Fototronic 7000 Series CRT Phototypesetter" offers high output speed (1,000 lines per minute) and large character storage capacity (up to 80 type faces). One system, according to the firm, can handle all of a newspaper's composition needs - classified and display advertisements as well as news articles. Sold from \$87,000 to \$160,000. The firm is also offering a "Video Layout System" (Model 2230) which is said to lower the cost of producing newspaper display ads by as much as 60 percent; and a low-cost copy processing system (Series 2530) engineered for newspapers with circulations of 20,000 and up. WRITE: Timothy P. Flaherty, Harris Compositions Systems Division, Dept. CN, P.O. Box 2080, 505 John Rodes Boulevard, Melbourne, Florida 32901 U.S.A.

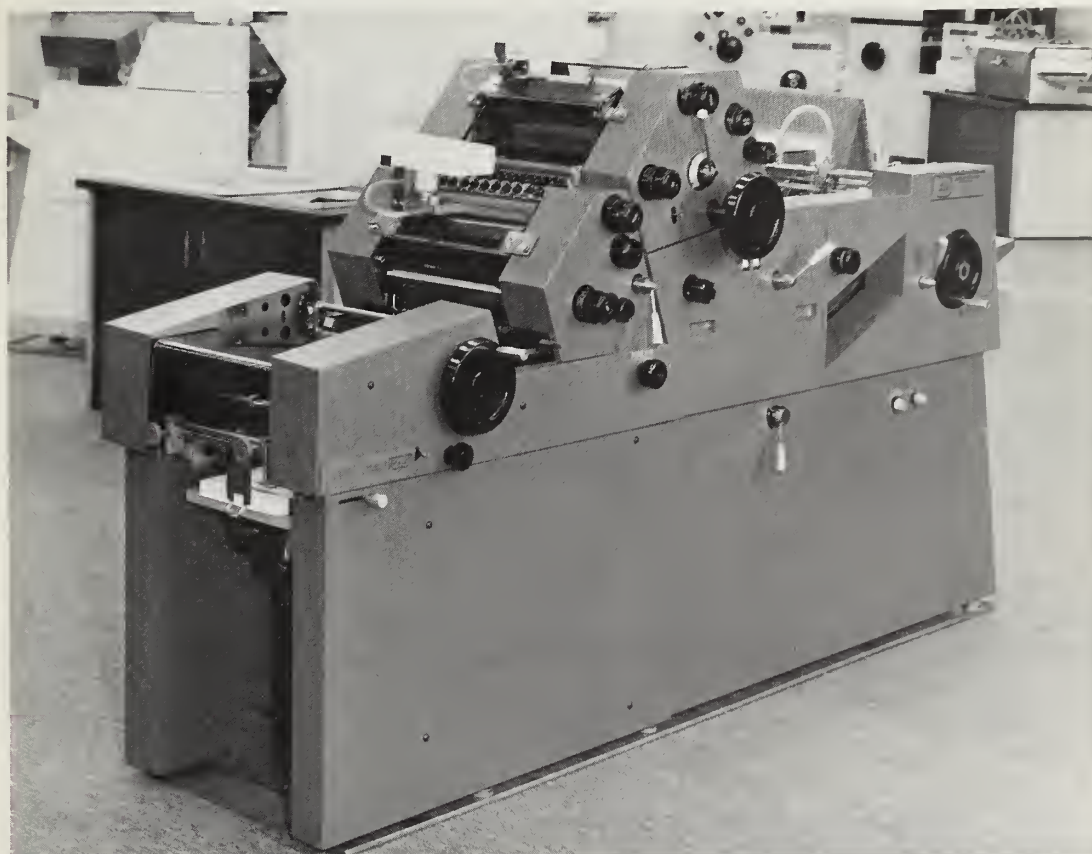
MULTI-LANGUAGE TEXT COMPOSITION SYSTEM -- Text composition and hyphenation in English and in other languages, becomes simple and efficient with the "Composer 1550" system. A broad selection of work stations, data storage equipment, and peripheral devices (magnetic tape units, line printers, optical character readers, etc.) suit the system to both commercial and inplant typesetting. Prices range from \$60,000 to \$150,000. WRITE: Stuart H. Charter, Imlac Corporation, Dept. CN, 150 A Street, Needham, Massachusetts 02194 U.S.A.

PRESSROOM EQUIPMENT



ROLL-FED OFFSET PRESS -- Conservatively rated, according to the firm, at 30,000 impressions per hour, the "Mark VI" web offset press is designed for maximum economy in short to medium production runs and offers the highest quality four-color printing. Low initial investment makes it ideal for printers of magazines, books, catalogs, and advertising publications. Priced from \$800,000 to \$1,000,000. WRITE: David A. MacGregor, George Hantacho Co., Inc., Dept. CN, 30 Warren Place, Mount Vernon, New York 10550. (photo)

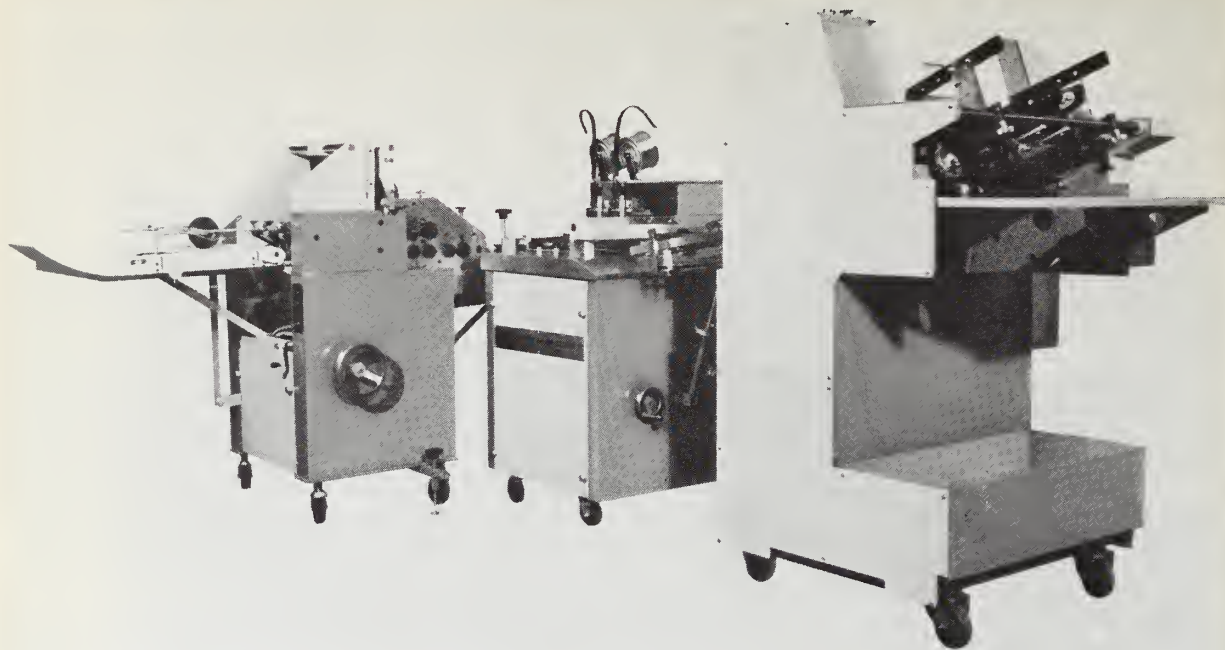
TWO-COLOR OFFSET PRINTING PRESS -- This firm introduces its "Model 215 Offset Printing Press" with two integral inking units for two-color printing jobs. The press features ten rollers on the first inking unit, eight on the second, a dampening unit for both inking units, and variable speed control from 4,500 to 9,000 impressions per hour. Price range is \$6,000 to \$30,000. WRITE: Ray Everett, ATF-Davidson Company, Dept. CN, Main Street, Whitinsville, Massachusetts 01588 U.S.A. (photo)



WEB OFFSET PRESS FOR BUSINESS FORMS -- An innovative new ink train gives the "Conservator Press" improved printing capabilities in any application from solids to fine lines as compared to other web presses of its size. The firm says that a modest investment brings very good returns in producing business forms and other printed material. The press prints up to 354 ft. of rolls stock per minute (107.9 m/minute). WRITE: Dennis K. Stotts, Didde-Glaser, Inc., Dept. CN, 1200 Graphic Arts Road, Emporia, Kansas 66801 U.S.A.

TWO-COLOR PRESS FOR PRINTING ENVELOPES -- The "Super Jet" is a wet offset perfecter press equipped to print two colors on one side of envelopes (60,000 envelopes per hour) or on two sides (30,000 per hour). The firm says this versatile unit will handle most commercial envelopes regardless of size or shape. The "Super Jet" is priced at \$38,000. WRITE: Steve Lyon, Halm Industries Company, Inc., Dept. CN, Glen Head Road, Glen Head, New York 11545 U.S.A.

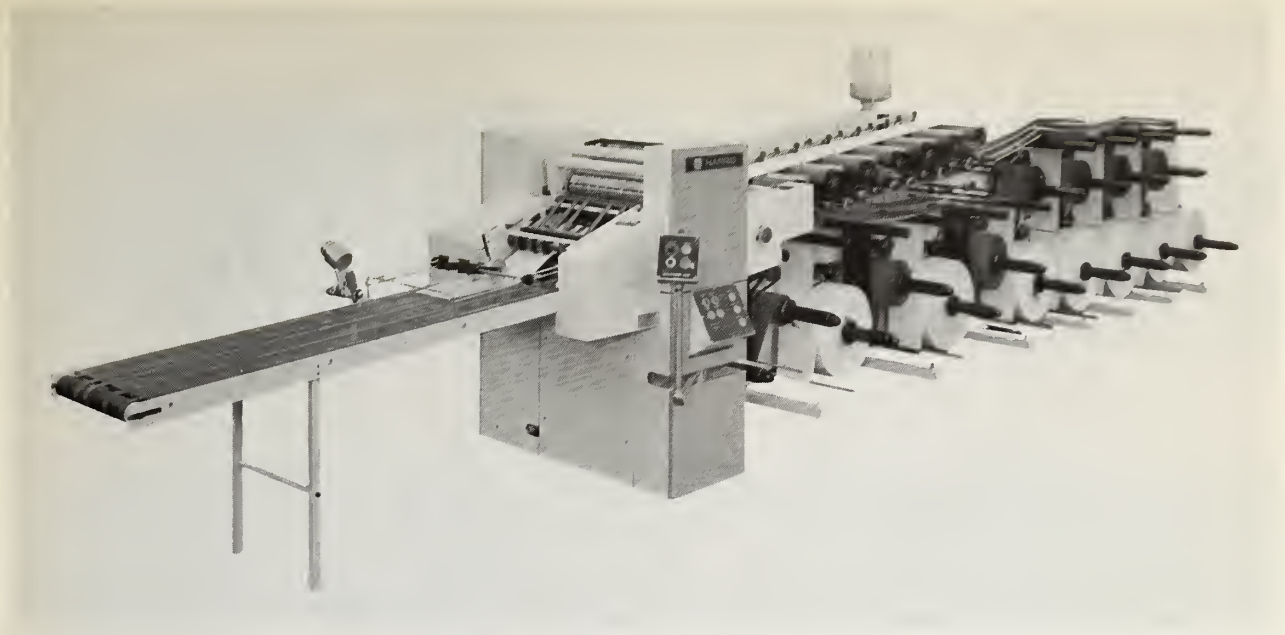
BINDERY AND FINISHING EQUIPMENT



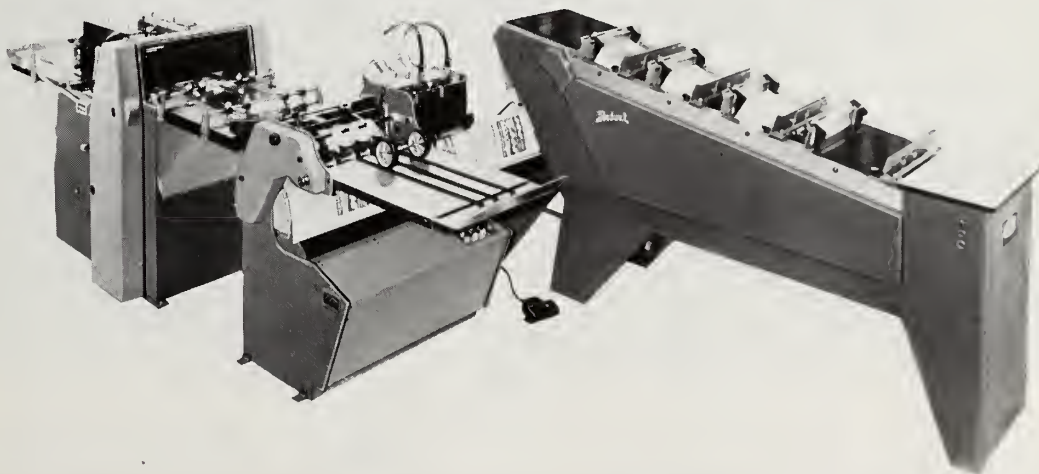
WEB SIGNATURE BINDER -- The new "Macey Signa-Binder" is engineered to produce self-covered, saddle-stitched booklets from web press signatures. The firm says one operator can produce up to 6,500 32-page booklets per hour with a minimum of difficulty. Priced under \$50,000. WRITE: G.W. McClure, Harris Corp., Bindery Systems Div., Dept. CN, P.O. Box 283, Easton, Pennsylvania 18042 U.S.A.

INCREASED SPEEDS FOR ASSEMBLING NEWSPAPERS -- Publishers will be interested in the "Model 660 Newspaper Staffer", designed to insert preprinted sections of a newspaper into the main body at speeds up to 15,000 per hour. Sections are piled in the appropriate order by in-line assembling stations and inserted into the paper at one time. Sells from \$80,000 to \$125,000. WRITE: Charles J. Nesbitt, McCain Manufacturing Corp., Dept. CN, 6200 West 60th Street, Chicago, Illinois 60638 U.S.A.

PAPER-FOLDING EQUIPMENT -- The Baumfolder 400 Series of commercial paper-folding equipment offers a broad selection of feeders, rollers, folding plates, and other options ideal for customizing each unit to the purchaser's needs. Operating speeds vary up to 4,800 in per minute (12,200 cm per minute). Special safety guards cover all fold rolls, belts, and drive components. Price range is \$3,000 to \$20,000. WRITE: Temple Nieter, Baumfolder Corp., Dept. CN, 5643 Sears Tower, 233 South Wacker Dr., Chicago, Illinois 60606 U.S.A.

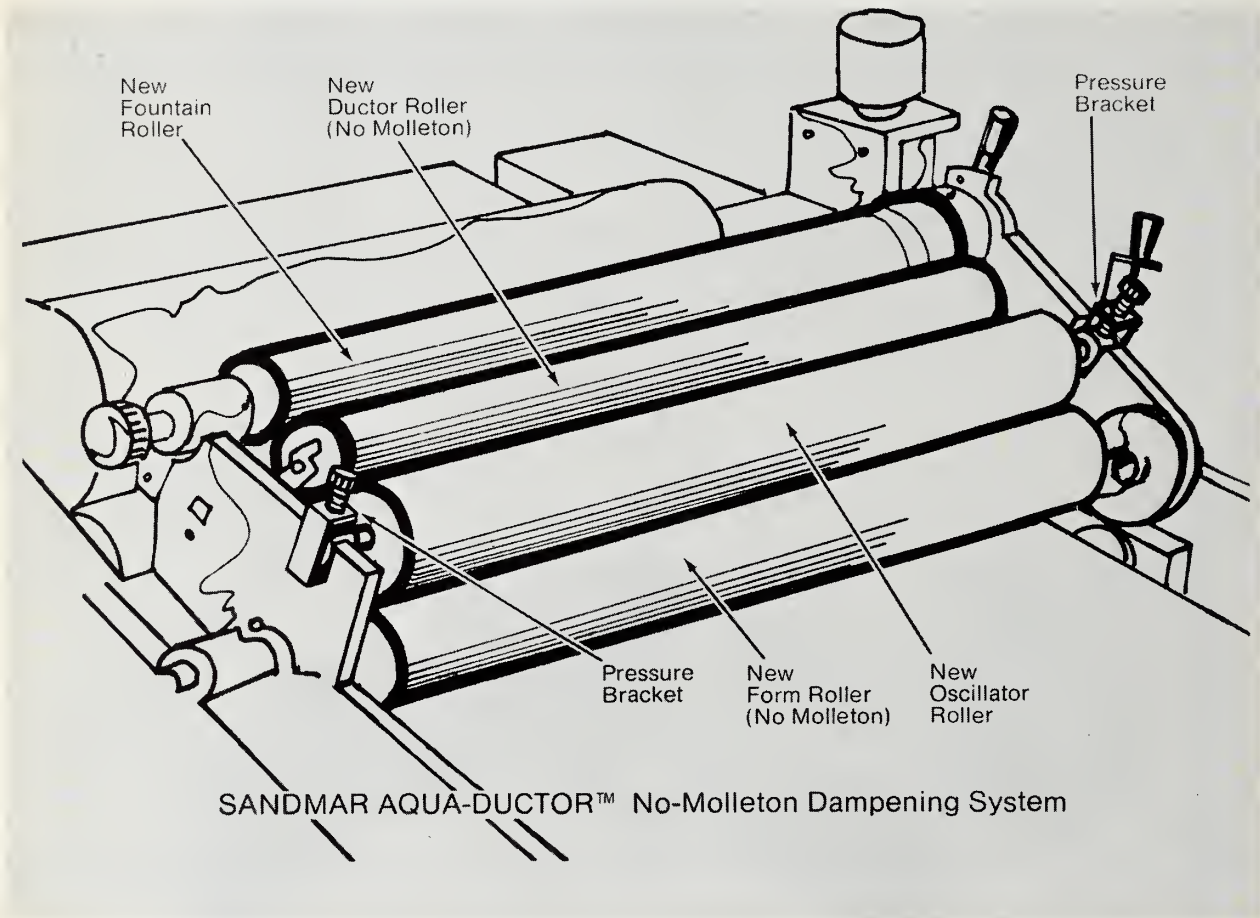


COLLATING EQUIPMENT FOR BUSINESS FORMS -- Designed for one-person operation, the "300A Collator" can produce business forms of as many as 8 parts at an average rate of 6,500 sets per hour on short production runs. Because of its special inclined design, the unit's work area is situated at a conveniently low height. Sold from \$50,000 to \$60,000. WRITE: C.J. Schaeffer, Harris Corp., Schriber Div., Dept. CN, 4900 Webster St., Dayton, Ohio 45414 U.S.A.



LOW-COST AUTOMATIC SADDLE BINDING SYSTEM -- According to the manufacturer, this "Model 203 Stitcher" offers, for the first time in a moderate price range, a totally automated system for feeding, stitching, and trimming multiple signature, saddle stitched books and booklets. The unit is designed for production runs of 500 to 500,000 booklets, allowing small printing operations to be competitive. Price range is \$2,000-\$30,000. WRITE: Joseph H. Turner, F.P. Rosback Company, Dept. CN, P.O. Box 899, Benton Harbor, Michigan 49022 U.S.A.

IMPROVED DAMPENING SYSTEM FOR OFFSET PRESSES -- The "Aqua-Ductor System", designed to replace existing dampening rollers on common offset presses, works without expensive, messy molleton covers. The four specially designed rollers are easy to install, the firm states, and provide easier printing with higher quality production. Price range: \$125-\$165. Graphic arts distributors sought. WRITE: Sanford F. Graw, Geiss-America, Inc., Dept. CN, 7330 Niles Center Road, Skokie, Illinois 60076 U.S.A. (photo)

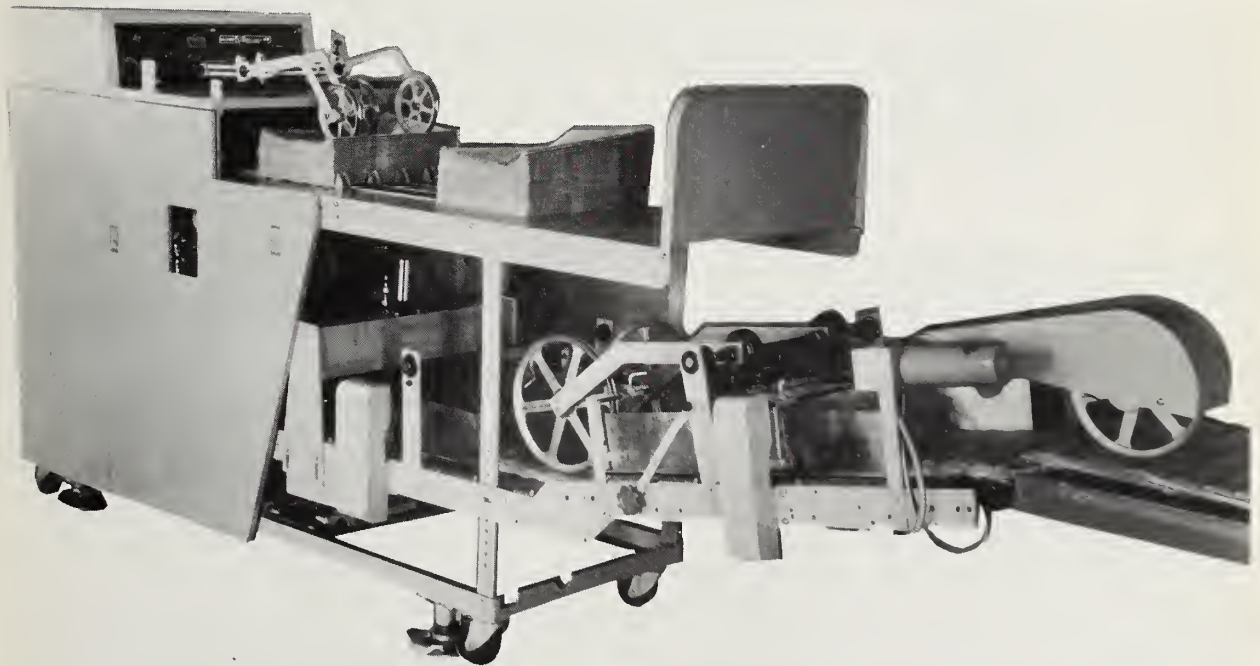


SANDMAR AQUA-DUCTOR™ No-Molleton Dampening System

NON-POLLUTING FOUNTAIN CONCENTRATE -- "Tame E.C.", a new fountain concentrate for offset lithography, is formulated without dangerous pollutants such as heavy metals (mercury, chromium, zinc, etc.), phosphates, and nitrates. The manufacturer says one or two percent added to plain tap water can improve print colors and halftones, and also reduce the drying and setting time of ink. Sells for \$12 to \$18 per gallon (3.8 l). WRITE: Kenneth W. Leeds, Anchor Chemical Company, Inc., Dept. CN, 500 West John Street, Hicksville, New York 11801 U.S.A.

AUTOMATED SPRAY SYSTEM FOR SPECIAL POWERS -- The manufacturer calls this the most advanced powder spray system ever devised for the printing industry. The desired amount of material is dialed before spraying and the unit automatically maintains the necessary powder level. The result is lower powder consumption, improved spraying efficiency. Applications include use with web presses for reduced waste and improved handling of signatures, reduction of static on plastic films, etc. Price range is \$1,500 to \$2,500. WRITE: Orlando F. Magaro, Ortman-McCall Company, Dept. CN, 1330 W. Washington Boulevard, Chicago, Illinois 60607 U.S.A.

MACHINE COUNTS AND STACKS NEWSPAPERS -- The "Count-O-Veyor" is designed to count and stack newspapers or signatures as they emerge from high-speed presses. The company says the unit can handle newspapers of up to 96 pages at a rate of 60,000 papers per hour: presses can be operated at full speed. Easy to move, easy to install, the "Count-O-Veyor" sells from \$11,000 to \$20,000. WRITE: Garret W. Walker, Baldwin-Gegenheimer Corporation, Dept. CN, 401 Shippan Avenue, Stamford, Connecticut 06902 U.S.A. (photo)



PRESS ACCESSORY MONITORS SHEET GUIDING -- The "Side Guide Detector System" employs two photo cell sensors to monitor the two side guiding mechanisms on the feed boards of most printing presses. Intended for use with all kinds of sheet stock, this compact unit can be set to sound an alarm or stop the press if five consecutive sheets are misguided. Price range is \$890-990. WRITE: Gordon W. Wilson, Electro Sprayer Systems, Inc., Dept. CN, 5423 Milton Parkway, Rosemont, Illinois 60018 U.S.A.

SIGN ENGRAVING SYSTEM FOR OFFICE USE

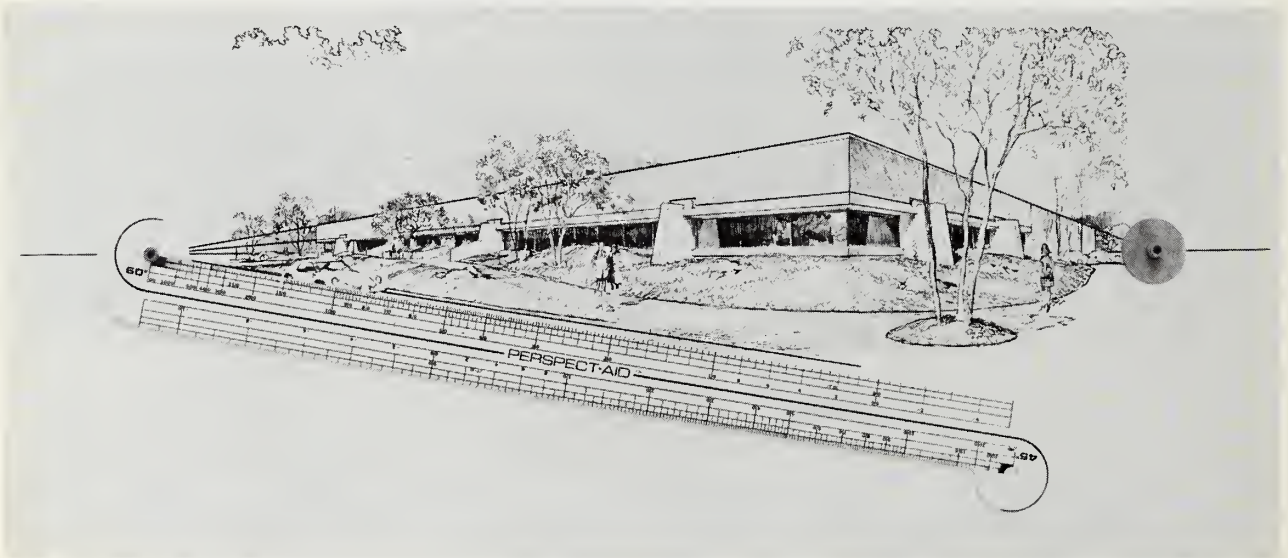
-- The "Signgraver" System offers small offices, government facilities, and others a means to engrave attractive signs at short notice for almost any purpose. A minimum of skill, time, and expense is needed to prepare name tags, directional signs, desk plates, and even large directory signs. Distributor inquiries are invited.

WRITE: Gary F. Ramsey, Scott Machine Export Sales Corporation, Dept. CN, Route 3, P.O. Box 1B, Walton, New York 13856 U.S.A.



* *

PERSPECTIVE DRAWING AID -- An innovative new tool for executing accurate perspective drawings to scale is called the "Perspect Aid". Time-consuming layouts and projection lines are eliminated because of the almost limitless variety of perspectives made possible by the aid's pivoting "vanishing points." One, two, and three-point perspectives, left and right orientation, views above or below the horizon, etc. are equally simple. Sold for \$20. WRITE: George E. Edlund, Edlund Enterprises, Dept. CN, 516 East Maude Avenue, Sunnyvale, California 94086 U.S.A.



PRINTING AND GRAPHIC ARTS EQUIPMENT

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222 South Riverside Plaza
Chicago, Illinois 60606
Barbara Bonham, Editor
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NEW PRODUCTS U.S.A.

The following product information, supplied by the listed U.S. firms, has been selected by Commerce for promotion through the New Product Information Service (NPIS). This information is also made available on a selected basis to Voice of America (VOA) for "New Product U.S.A." broadcasts. While the firms listed here are believed to be reliable, no responsibility can be assumed by the U.S. government or its representatives for the accuracy of these new product descriptions. Both technical and non-technical products are included below to ensure worldwide market applicability. Please reprint as many new product descriptions as possible.

AGRICULTURAL MACHINERY AND EQUIPMENT (Including Animal Husbandry and Veterinary Sciences)



AGRICULTURAL COMBINE FOR BEAN FOODS -- Designed to be towed by a conventional agricultural tractor, the "6200 Edible Bean Combine" offers greater harvesting capacity, reduced damage to beans, and operation at twice the speeds of conventional combines with bean heads. Variable speeds of the three threshing cylinders are adapted to a wide range of bean varieties and harvesting conditions. Sells for \$13,500. WRITE: Robert I. Stinson, Lilliston Corporation, Dept. CN, P.O. Box 3930, Albany, Georgia 31706 U.S.A.

MOTORIZED HAND PLOW -- The "Uniplow" is especially engineered to meet the need of small farmers for an inexpensive mechanical plow to help increase agricultural productivity. The manufacturer says it is easy to operate over all types of soil and ground conditions -the operator only needs to guide it in the proper direction. Priced from \$750 to \$950 C.I.F. Distributors are sought. WRITE: Jerome Z. Badner, Amprestes Disc Overseas Limited, Dept. CN, 41 East 42nd Street, New York, New York 10017 U.S.A.

* *

HYDRAULIC UNIT CONVERTS PICKUP TRUCKS TO DUMP TRUCKS -- This electric/ hydraulic hoist is designed to convert standard 1/2 ton (.45 t) and 3/4 ton (.7 t) pickup trucks into functioning dump trucks. Though made of heavy gauge steel, the hoist is inexpensive and simple to install. Hoist capacity is 5,000 lbs (2,250 kg). Ideal for consumer use, small businesses, light construction or industry. Price: \$895. The firm seeks agents and distributors. WRITE: D.D. Shanks, E-Z-Lift, Limited, Dept. CN, P.O. Box 1499, 1760 High Pine Drive, Estes Park, Colorado 80517 U.S.A.

* *

STORAGE SILOS FOR HIGH-MOISTURE GRAIN -- "Mirastor" fiberglass silos are said to improve storage of both high and low moisture grains by resisting heat conduction, the cause of extreme temperatures in metal silos. Since high-moisture feeds are safely stored, the firm notes, harvesting losses can be reduced, time and costs saved on drying processes, and the quality of cattle or hog feed improved. Prices range from \$2,600 to \$18,450 depending on size (1,400 to 21,100 bushels -14,096 to 743,564 liters). WRITE: Dean Boettcher, Mirastor Company, Dept. CN, Route 2, P.O. Box 167, Camby, Indiana 46113 U.S.A.

* *

AUDIO - VISUAL

TRAINING AIDS FOR TEACHING ELECTRIC MOTORS, GENERATORS -- Designed to provide complete instruction in electrical motors and generators, the "Hampden Series 100" program offers a selection of teaching materials for trade schools, engineering colleges, etc. Available are 1) rotors and stators for students to assemble into functional machines; 2) ancillary equipment (power supplies, meters, etc.); 3) teaching materials in the form of cassette tapes and color slides; 4) laboratory manuals. Students can progress at their own rates. Price range is \$20,000 to \$25,000. WRITE: J.M. Flynn, Hampden Engineering Corporation, Dept. CN, 99 Shaker Road, P.O. Box 563, East Longmeadow, Massachusetts 01028 U.S.A.

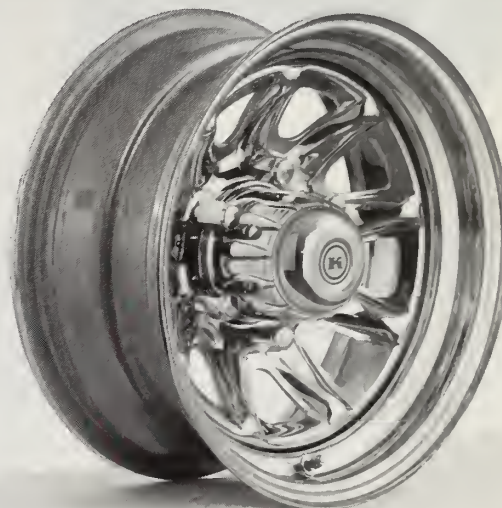
* *

MULTI-PURPOSE AUDIO/VISUAL PROJECTOR -- The "Cue/See Model 2200" 8mm film projector combines a capacity for still frames, motion pictures, and animation with synchronized sound. The unit features a built-in viewing screen and a projector unit for wall screens. Perfect, the firm says, for sales demonstrations or student instruction, the "Cue/See" offers rugged construction, simple operation, and a "pause/proceed" function for self-pacing. Priced from \$496 to \$564. Agents and distributors sought. WRITE: Mrs. A. Sweeney, Charles Beseler Company, Dept. CN, 8 Fernwood Road, Florham Park, New Jersey 07932 U.S.A.

* *

AUTOMOTIVE

NEW DESIGN IN STEEL AUTO WHEELS -- The "Treker" is a new steel wheel, available for most automobiles and trucks, which features a unique 9-spoke design with a steel stamped center. The wheel is finished in either a high-grade polyester paint or an attractive chrome plating. Each wheel is load rated for maximum safety. WRITE: Kevin Bradley, Keystone Products, Inc., Dept. CN, P.O. Box 780, 1333 South Bon View Avenue, Ontario, California 91764 U.S.A.



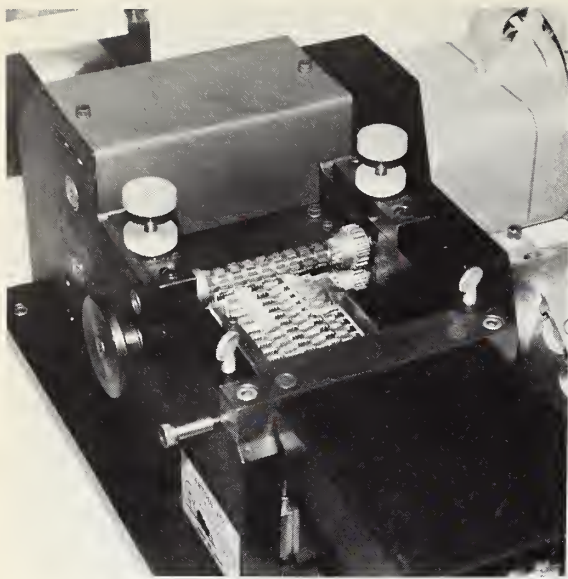
* *

MECHANICAL TOOL FORMS BRAKE FLARES -- This firm has engineered a new precision tool for manufacturing "flares" - an important part of the braking system of a motor vehicle. Forged of pure tool steel in a rugged one-piece construction, the "Silver Bullet" forms precision flares in a simple one-step process. Price range is \$25-\$50. WRITE: Warren Crane, No Kink, Inc., Dept. CN, 35 Abbett Avenue, Morristown, New Jersey 07960 U.S.A.

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INDUSTRIAL AIR GUN -- The manufacturer believes this to be the only industrial air gun with the safety tip built into a one-piece, die-cast construction. This prevents the gun from being made unsafe by accidental removal of the tip. The unit is contoured to fit comfortably in the hand and includes a large hook for hanging. Recommended for machine shops, aircraft plants, service stations, etc. Sells for approximately \$5. Distributors sought. WRITE: H.M. Robinson, Dynaire Products, Dept. CN, 2663 Seaman Avenue, Elmonte, California 91733 U.S.A.

* *



PRODUCTION UNIT FOR AUTOMOTIVE RADIATOR CORES -- Intended for use by manufacturers of automotive radiators, the "Radiator Fin Machine" manufactures regular or customized cores for both U.S. and foreign radiator models. Production time for one radiator core is only 20 minutes and cost savings up to 50 percent are possible. Cross flow radiators can be produced, as well as, other industrial equipment (heaters, etc) which use radiator fins. Price: \$8,500. WRITE: Anthony Naroq, Amtool, Inc., Dept. CN, 15235 Weststate Street, Westminster, California 92683 U.S.A.

* *

WASHING SYSTEM FOR VEHICLES OF ALL SIZES -- This firm offers an innovative washing system engineered to accommodate a wide range of vehicle sizes and shapes from compact automobiles to buses and vans as tall as 12 ft (3.6 m). Measuring 70 ft long (21.3 m) by 24 ft wide (7.3 m) by 18 ft high (5.48 m), the entire system sells from \$50,000 to \$100,000. WRITE: Pierre L. Ours, Hanna International, Dept. CN, P.O. Box 3736, Portland, Oregon 97208 U.S.A.

* *

LOW FRICTION MOTOR OIL -- "Arco Graphite Motor Oil" offers low friction properties which help provide: 1) improved fuel economy (up to 8.7 percent), 2) reduced engine wear (45 percent lower), 3) easy starting at low temperatures, and 4) excellent lubrication at both high and low temperatures. Applicable to all automobiles and many other vehicles, this product sells for \$2.56/gallon. WRITE: R.W. Sublett, Atlantic Richfield Company, Dept. CN, 515 South Flower Street, Los Angeles, California 90071 U.S.A.

* *

BUILDING, CONSTRUCTION AND MATERIALS HANDLING

MANUFACTURING UNIT FOR FLEXIBLE METAL AIR DUCTS -- This company offers a production unit for manufacturing flexible aluminum air ducts in standard diameters (both English and metric systems) from 3 to 18 in (7.6 - 45.7 cm). Simple to maintain and operate, this compact unit produces up to 1,000 ft (300 m) of ducting per hour. Suggested for installers of heating/air conditioning systems, fan exhaust vents, etc. Price range: \$12,000 - \$25,000. WRITE: C. William Schaefer, Metalflex Corporation, Dept. CN, 1300 E. North Avenue, Baltimore, Maryland 21213 U.S.A.

PREFABRICATED ALUMINUM STRUCTURES -- These prefabricated shelters, according to the manufacturer, can be easily constructed in a few hours by a single workman using only basic hand tools. Made of lightweight aluminum, the shelters can be assembled without special foundation, while the expandable modular design is ideal for field conditions. Used as storage facilities, work sheds, emergency housing, etc. Price ranges from \$2,000 to \$8,000. The firm seeks agents, distributors. WRITE: Rudolph Nasr, Basic Shelter Kits Company, Dept. CN, 9604 Variel Avenue, Chatsworth, California 91311 U.S.A.

* *

ONE-PIECE CEILINGS FOR MOBILES, MODULAR HOMES -- Using attractive, long-lasting construction materials, this firm now offers a new seamless, one-piece ceiling for mobile or modular homes. "Tylon" ceilings are said to reduce noise four times as effectively as many alternatives ceilings. The special white acrylic coating resists mold, mildew, cracking and chipping, deterioration, and discoloring. WRITE: Dr. Louis Hernandez, United Foam Corporation, Dept. CN, 2626 Vista Industria, Compton, California 90221 U.S.A.

* *

ADHESIVE HANGERS FOR INSULATION MATERIAL -- Designed for insulation and air conditioning contractors, the self-adhering "Tactoo Insulation Hangers" offer a fast, sure means of attaching insulation to clean, dry, smooth, non-porous surfaces. The product's specially prepared steel base plate, protected by a release paper, adheres instantly to surfaces for immediate installation of insulating material. Priced at about 6¢ each. WRITE: Barth Gilcrist, Imber Associates, Inc., Dept. CN, One Park Avenue, New York, New York 10016 U.S.A.

* *

TRANSPARENT "DRIVE-THROUGH" CURTAINS FOR INDUSTRIAL SITES

-- Tough, flexible "Clearstrip" is a series of hanging strips, made of transparent vinyl, which partially or fully overlap to form a door or divider for industrial sites. Pedestrians and fork trucks can move through the door without stopping: it automatically closes behind. It keeps out rain, dust, fumes, keeps in heated or refrigerated air, and acts as a noise barrier. Sells from \$275 to \$2,000. WRITE: Ronald C. Kurtz, Mesker-Clark International Sales, Dept. CN, 69 Myrtle Street, Cranford, New Jersey 07016 U.S.A.



* *

AUTOMATIC TAPING SYSTEM FOR DRYWALL CONSTRUCTION -- The pneumatically operated "Corban Tape-gun System" is said to reduce the time needed for drywall taping jobs by 15 percent over mechanical systems and 300 percent over manual methods. Worker fatigue is also lower since cement is carried in a 4-liter (8.4 pt.) backpack tank rather than in the unit's handle (as with conventional systems). One tank applies fifty meters (165 ft) of tape. Price: \$3,000 F.O.B. San Jose, California. WRITE: Arthur Smith, Corban Industries, Dept. CN, 100 Bellevue Avenue, San Jose, California 95110 U.S.A.

* *

EMERGENCY RELEASE-BAR FOR GLASS DOORS -- Pressure bars for metal-lined glass doors have been designed which provide immediate exit when as little as 8 lbs (3.6 kgs) of pressure is applied. Even when a load of 250 lbs (112.5 kgs) is applied to the door (by a crowd during an emergency), only 50 lbs (22.5 kgs) of release pressure is required. Models are available for both single and double doors. Price: \$116 - \$126. WRITE: Richard S. Clark, Adams Rite Manufacturing Company, Dept. CN, 4040 South Capitol Avenue, City of Industry, California 91749 U.S.A.

* *

INSTALLATION SYSTEM FOR UNDERWATER CABLES -- The "Subaqueous Trencher" buries submarine cable at depths up to 5 ft (1.5 m) beneath the bottom and at speeds as high as 20 ft (6 m) per minute. The trencher disturbs the floor less than any other current cable-laying method, the firm says, so the water stays un-muddied and safe for wildlife. With hydraulic digging wheel, the unit sells between \$300,000 and \$500,000. The firm seeks service contracts, agents, and/or licensees. WRITE: Robert R. Spearman, Spearman Marine Construction, Inc., Dept. CN, 2208 Idlewilde Court, Lake Park, Florida 33410 U.S.A.

* *

BUSINESS AND OFFICE EQUIPMENT

"FLEXLOCK" PROTECTS PORTABLE OFFICE EQUIPMENT FROM THEFT -- This is a 48 in (122 cm) steel cable, wrapped in plastic to protect hands, furniture, etc., and equipped with swivel brackets at both ends. One end is bolted to a desk or table, the other padlocked to valuable typewriters, adding machines, medical equipment, or other property to prevent theft. Use of office equipment is not hindered. Sells for \$29.95. WRITE: Leonard E. Prince, Flex-Lock, Inc., Dept. CN, P.O. Box 3149, Dallas, Texas 75221 U.S.A.

* *

AUTOMATIC MONITOR FOR TELEPHONES -- The "Message Detail Recorder," according to this firm, is a "telephone historian" that records extension numbers, numbers phoned, and the time and duration of all outgoing calls. This allows the owner to allocate telephone costs according to use by individuals or departments, eliminate telephone abuse, and establish telephone efficiency studies. Priced from \$8,000 to \$21,000. WRITE: John A. Neal, Calculagraph Company, Dept. CN, 272 Ridgedale Avenue, E. Hanover, New Jersey 07936 U.S.A.

CHEMICAL AND PETROCHEMICAL INDUSTRIES

NEW PIPE FITTING BLENDS OR AGITATES LIQUIDS -- This firm offers a specially designed pipe fitting which can blend, agitate, recirculate, heat, or aerate a variety of liquids without the use of moving parts. The "Suction Tee" works with steam, oil, water, or chemicals and has very low cost and power requirements. Sold from \$10 to \$500 in a range of metals. Agents sought. WRITE: J. Merle Smith, Watson McDaniel Company, Dept. CN, 975 Madison Avenue, Valley Forge Corporation Center, Norristown, Pennsylvania 19401 U.S.A.

* *

IMPROVED PUMP JACKS FOR PETROLEUM FIRMS -- The firm states that the "Stripper Gem" pump jack is simpler, stronger, and more durable than any comparable unit on the market. The machine's single-arm push rod, with rugged bearings originally designed for aircraft, keeps the "Stripper Gem" in line despite any swaying of the balance beam or similar problems. Price is \$2,000-\$4,000. WRITE: Joseph F. Neitzel, Stripper Gem Company, Inc., Dept. CN, Grand Central Avenue, P.O. Box 5333, Vienna, West Virginia 26105 U.S.A.

* *

ROTARY VALVE FOR INDUSTRIAL FLOW CONTROL -- Intended for flow control in chemical, refining, petrochemical, mining, and other operations, the "KMax Rotary Valve" provides greater versatility, lower weight, and reduced cost as compared with conventional globe valves. It offers the option of flangeless connections or slip-on flanges, and features a spherical seat ring that provides tight closure without bending the plug structure. Priced from \$600 to \$1,600. WRITE: John W. Post, Kieley and Mueller, Inc., Dept. CN, P.O. Box 907, 64 Genung Street, Middletown, New York 10940 U.S.A.

* *

COMPUTERS AND PERIPHERALS

GRAPHIC DIGITIZER FOR ENGINEERING, SURVEYING -- Designed to convert graphic forms (maps, drawings, etc.) into digital data for computer input and easy storage, the "Datatab" is said to be the first all-electronic digitizer combining high resolution (0.001 in) and accuracy (0.002 in) with a system for maintaining "absolute" coordinates. This system allows the cursor unit to be moved to a new location on a drawing or map without loss of coordinates. Priced from \$5,600 to \$10,260. WRITE: D.S. Larson, Altek Corporation, 2150 Industrial Parkway, Silver Spring, Maryland 20904 U.S.A.

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DISTRIBUTED DATA PROCESSING SYSTEM -- Two versions of this new processing system are available: the "System 21/20" for basic data entry functions, and the "System 21/40" which can be programmed by the user for special processing functions. In both versions, an intelligent processor unit controls up to 4 operator stations with keyboards and video display screens. The modular design is ideal for system expansion. Priced from \$6,000 to \$20,000. WRITE: Matthew R. Smith, Mohawk Data Sciences Corporation, Dept. CN, 1599 Littleton Road, Parsippany, New Jersey 07054 U.S.A.



PORTABLE DATA ENTRY TERMINAL -- This programmable data entry terminal is engineered for applications in which a portable, self-contained unit is needed. The hand-held "MSI/77" incorporates a C/MOS (Complementary Metal Oxide Semiconductor) memory with very low power requirements and runs on inexpensive "AA" batteries. Price is \$1,100. Used for monitoring retail sales, inventories, accounting data, etc. WRITE: Leon Tomasyan, MSI Data Corporation, Dept. CN, 340 Fischer Avenue, Costa Mesa, California 92627 U.S.A.

CONSUMER GOODS

"GYRO TOP" AMUSES CHILDREN FOR HOURS -- The "PST Wheeler Gyro Top" is an innovative toy designed to keep children happy for hours at a time. Besides spinning like a conventional top, the "Gyro Top" can walk, race, or jump as the child prefers. Made of hard, durable plastic, it is difficult to damage - even for the most imaginative child. Priced at \$36.00 per dozen. WRITE: Bert E. Rosenstock, Berint Trading Limited., Dept. CN, 12 Westchester Avenue, White Plains, New York 10601 U.S.A.

* *



"PAINTING PADS" SOLVE OLD PAINTING PROBLEMS -- The "PTK-X Paint-Pad Kit" represents a new approach to painting indoor and outdoor wall surfaces. "Paint Pads" are faster than paint brushes for large jobs and, unlike rollers, they don't splatter or spray. The firm says they reduce muscle strain, waste of paint and time, and all but eliminate the mess of home painting. The "Paint-Pad Kit" includes a number of pad tools for various tasks. Price range is \$3.00 to \$5.00. WRITE: Daniel F. Braun, Padco, Inc., Dept. CN, 2220 Elm Street, S.E., Minneapolis, Minnesota 55414 U.S.A.

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INNOVATIVE NEW DESIGN IN BALL-POINT PENS --

The refillable "Space Quill" pen is engineered with 10 distinct innovations to increase writing speed and comfort while eliminating "writer's cramp." Carefully designed contours and a flexible band holds the pen in place against the index finger in order to relieve the pressure needed to grip the pen and reduce the chance of its slipping during use. Retails from \$1 to \$3 each.



The firm seeks agents, distributors, and licensees. WRITE: Barbara J. Laybourne, Space Quill Corporation, Dept. CN, Route 5, P.O. Box 166A, Martinsburg, West Virginia 25401 U.S.A.

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ENGRAVING KIT PERMANENTLY MARKS VALUABLES -- TV sets, radios, cameras, sporting equipment, Jewelry - almost any valuable property can be permanently marked for security with this "Security Engraver Kit". The kit includes an engraving tool (non-vibrating) with tungsten carbide tip, adhesive warning labels (to deter thieves), a record booklet, and complete instructions. Priced at \$1.55 F.O.B. Los Angeles. Firm is seeking stocking distributors and agents. WRITE: Leon Cooper, Home Safeguard Industries, Inc., Dept. CN, 11941 Wilshire Boulevard., Los Angeles, California 90025 U.S.A.

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COLORED FELT - LOW COST, MACHINE-WASHABLE -- "UltraFELT" is described as the world's only machine-washable colored felt. Manufactured by a new process from polyester fibers, "UltraFELT" uses no binding agents which would harm its soft, silk-like texture. It can be cut, sewn, stapled, printed, or glued for use in store displays, showrooms, and exhibits, and for home use in decorating. Priced under \$1.40 C.I.F. Distributor inquiries welcome. WRITE: Steven B. Kunin, S.H. Kunin Felt Company, Inc., Dept. CN, Brussels Street, Worcester, Massachusetts 01610 U.S.A.

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"HYDROTHERAPY SPA" FOR BACKYARD SWIMMING POOLS --

Inspired by the recent interest in hydrotherapy spas for the home, this firm has designed the inexpensive "Hot-Spa" which floats in any swimming pool and uses the pool's filtration and heating systems to provide swirling, invigorating hot water jets. With optional seats and rails, the "Hot-Spa" sells for about \$1,000. Basic unit wholesales under \$700. WRITE: Clayton C. Russell, Fox Pool Corporation, Dept. CN, Board Road, P.O. Box 549, York, Pennsylvania 17405 U.S.A.



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REUSABLE PLASTIC LIDS FOR HOME CANNING -- Distributors and agents are sought for this new plastic jar lid designed for canning fruit and other foods at home. Used with a conventional metal screw band, the hard plastic lid and natural rubber gasket form an impenetrable seal to preserve food contents. The lids resist food acids and will not flake or peel. Sells under \$1.60. WRITE: Peggy Kinlaw, Invention Marketing, Inc., Dept. CN 12th Floor, Arrott Building, Pittsburgh, Pennsylvania 15222 U.S.A.



STORAGE, HANDLING SYSTEM FOR EXTENSION CORDS -- The "EZ Cord Control" neatly holds up to 150 ft. (45 m) of extension cord, eliminating tangles and preventing the hazards common with long cords. The lightweight unit can be attached to walls, boat docks, etc. or mounted on power lawn mowers and similar equipment. The durable plastic product sells for about \$3.50. The firm is actively seeking overseas agents and distributors. WRITE: W. Colton Hough, Jr., Colton Creators, Inc., Dept. CN, P.O. Box 70, East Williston, New York 11596 U.S.A.

RETRACTABLE LEASH FOR SMALL PETS -- Made of stainless steel and tough plastic, this retractable leash attaches permanently to a pet's collar where it is always ready for use. The "Retract-a-Leash" extends to 1.124 meters length, yet maintains constant tension on the animal through a special spring mechanism. Should the line become entangled around trees etc., it will automatically retract to the pet's collar if released. Sells from \$4 to \$6 F.O.B. West Coast, U.S.A. WRITE: D.E. Lantz, Wildwood Products, Dept. CN, 18107 Highway 18, Apple Valley, California 92307.





DECORATIVE SCULPTURES OF MARINE WILDLIFE

-- These handsomely styled sculptures of sea gulls, dolphins, whales, and other marine animals are made from a translucent white compound ideal for home or office decoration. Each sculpture is mounted on a base of driftwood, polished serpentine marble, or other materials. Priced from \$15 to \$200. WRITE: George M. Marlowe, John L. Perry Studio Inc., Dept. CN, 2323 Teller Road, Newbury Park, California 91320 U.S.A.

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ENERGY: Electric and Other (Machinery & Equipment for Production and Distribution)

SOLAR-POWERED FAN -- The problem of cooling attics, sheds, chicken coops, and similar buildings is solved, says this manufacturer, by the low-voltage "Solar Fan." A group of solar cells, mounted outside the building, automatically powers the fan from about two hours after sunrise until two hours before sunset. Sold from \$104 to \$175. WRITE: Kees van der Pool, Sensor Technology, Inc., Dept. CN, 21012 Lassen Street, Chatsworth, California 91311 U.S.A.

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ELECTRONIC COMPONENTS

HIGH STRENGTH COPPER ALLOY STRIP -- "Chase 69000" is a new copper alloy strip designed for wiring devices, relays, springs, and high-strength shells. Its strength level is said to be as much as 33 percent greater than that of beryllium copper alloys and some phosphor bronzes. Selling for approximately \$1.15 per pound (0.45 kg), "Chase 69000" is almost 15 percent less expensive than available phosphor bronzes. WRITE: R.B. Oristano, Chase Brass and Copper Company, Inc., Sheet Division, Dept. CN, 1121 East 260th Street, Cleveland, Ohio 44132 U.S.A.

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GENERAL INDUSTRIAL MACHINERY AND EQUIPMENT (Including Process Controls)

INDUSTRIAL DIGITAL THERMOMETER -- This firm has produced a digital thermometer for quick, accurate measurement of temperatures within a range of -40 to +100 degrees Centigrade (-40 to +212 degrees Fahrenheit). Various probes and tips are available for use in food processing, building maintenance, quality control processes, etc. Response time: 10 to 15 seconds in liquids and solids. Accurate to within 1 degree C/F. The portable unit sells from \$76.50 to \$89.95. Distributor inquiries welcome. WRITE: Dan Veenstra, Zirex Corporation, Dept. CN, 194 Constitution Drive, Menlo Park, California 94025 U.S.A.

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MOBILE SCISSORS-LIFT PLATFORMS -- "Sky Climber Mobile Platforms" provide indoor/outdoor working heights up to 9.3 meters (31 ft). According to the firm, these scissor-lift mobile platforms have a load capacity of 900 kgs (2,000 lbs) and require no outriggers or additional supports. Very low storage height and small turning radius. A smaller model can lift as much as 450 kgs (1,000 lbs) to a height of 6.3 meters (21 ft). Price range is \$6,000 - \$18,000. WRITE: Gary R. Hooper, Sky Climber, Inc., Dept. CN, 11620 South Alameda Street, Lynwood, California 90262 U.S.A.

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STAINLESS STEEL INDUSTRIAL SCREENS -- Engineered for a wide range of industrial materials (minerals, chemicals, foodstuffs, sand and gravel, coal, etc.), these stainless steel screens are built to meet each purchaser's requirements for strength, particle retention, and size openings. Any specified width, length, and shape is possible. Fusion welding is used to assure strength and life of the screen. The firm is seeking agents and sales. Sells from \$100 to \$2,000. WRITE: J.D. Connolly, Conn-Weld Industries, Inc., Dept. CN, P.O. Box 1238, Princeton, West Virginia 24740 U.S.A.

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HEALTHCARE INDUSTRIES

LIFELIKE "HUMAN" ARM FOR DIALYSIS TRAINING -- The "Fistula Training Arm" is a lifelike replica of a human forearm designed for dialysis training programs. The manufacturer says its realism makes it a practical tool for teaching fistula needle insertion techniques: a patient quickly gains the experience, skill, and confidence to perform the operation on his own arm. Synthetic blood increases the realism of training. With replacement parts, needles, and syringe, the arm sells for \$60. WRITE: Sandy Trnka, Gauthier Industries, Inc., Dept. CN, 300 First Street, N.E., P.O. Box 359, Rochester, Minnesota 55901 U.S.A.

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DIGITAL UNIT MEASURES CALCIUM IN SOLUTIONS -- According to the manufacturer, the "Fiske Automatic Calcimeter" determines the amount of calcium in solutions by using special chemical reagents (titration method). A digital display offers accuracy with simple, one-step calibration. The Calcimeter, with complete reagent kit, automatic pipette, and tips, sells for \$2,195. Suggested for clinical, industrial, and dairy labs. WRITE: Fred J. Pickering, Fiske Associates, Inc., Dept. CN, P.O. Box 347, Uxbridge, Massachusetts 01569 U.S.A.

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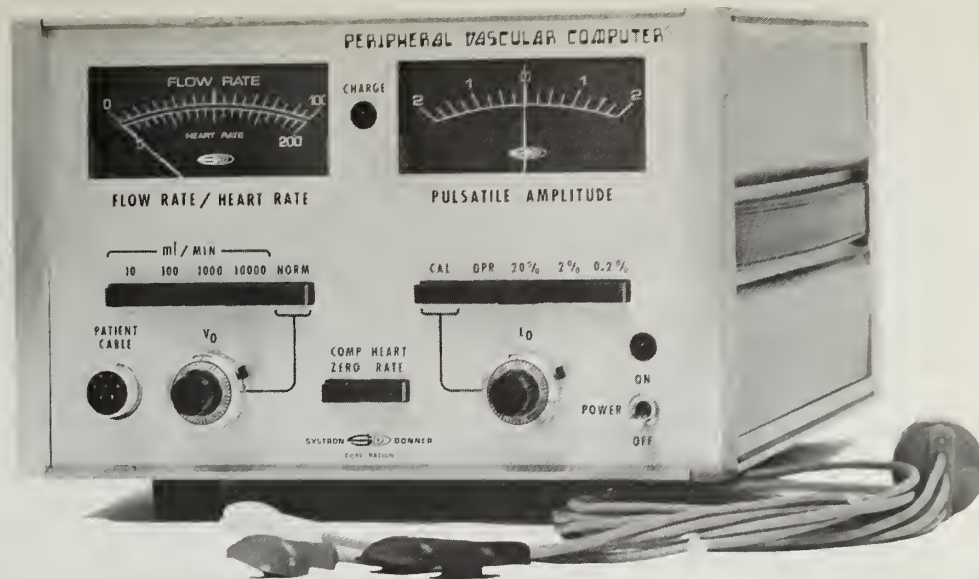
SELF-CONTAINED KITS FOR ANTIBODY TESTS -- Medical laboratories will be interested in the "IFA Prepared Antibody Tests" which are used to detect antibodies (Antinuclear, Mitochondrial, Thyroid, etc.) associated with various diseases. Reproducible, high quality tests can be obtained in as little as 90 minutes. Each test contains antigen slides, conjugates, counterstains, and all other test materials needed. Firm seeks agents and distributors. WRITE: John Geppert, BioDx, Dept. CN, 103 Washington Street, Morristown, New Jersey 07960 U.S.A.

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MEDICAL SYSTEM FOR PULMONARY STUDIES -- The "Floop" system receives, stores, displays, and prints out both data and graphics on a patient's respiration and other lung functions. The compact, solid-state unit combines a microprocessor, CRT display screen, and pulmonary function spirometer which is easy and quick to use. Priced from \$10,000 to \$15,000. Dealer inquiries are invited. WRITE: Dorothy Jovaag, Med Science Electronics, Dept. CN, 1455 Page Industrial Boulevard, St. Louis, Missouri 63132 U.S.A.



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SYSTEM FOR MEASURING BLOOD FLOW -- The new "Peripheral Vascular Computer" provides a means of measuring blood flow in local areas of the body without the use of surgery. The unit is said to be safe, rapid, and painless, using aluminum strip electrodes fastened to the skin over the area of interest. The system also features a heart rate display, pulse amplitude display, programmed systems check, etc. Price range is \$5,000 to \$18,000. WRITE: William J. Detmer, Systron-Donner Corporation, Inertial Division, Dept. CN, 1090 San Miguel Road, Concord, California 94518 U.S.A.

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DISPOSABLE ORAL THERMOMETERS -- Available in both Fahrenheit and Centigrade scales, the "Uni-Temp" disposable medical thermometer gives clear, accurate readings in as little as 45 seconds - more quickly than mercury thermometers. Special temperature-sensitive chemicals change color to show the user's temperature in increments of 0.2 degrees. A plastic case keeps each thermometer sterile and ready for use. Priced under 20¢ per unit. Agents and distributors are sought worldwide. WRITE: Scott Ferguson, Sco-Mil International, Inc., Dept. CN, 2845 - 152nd Avenue, N.E., Redmond, Washington 98052 U.S.A.

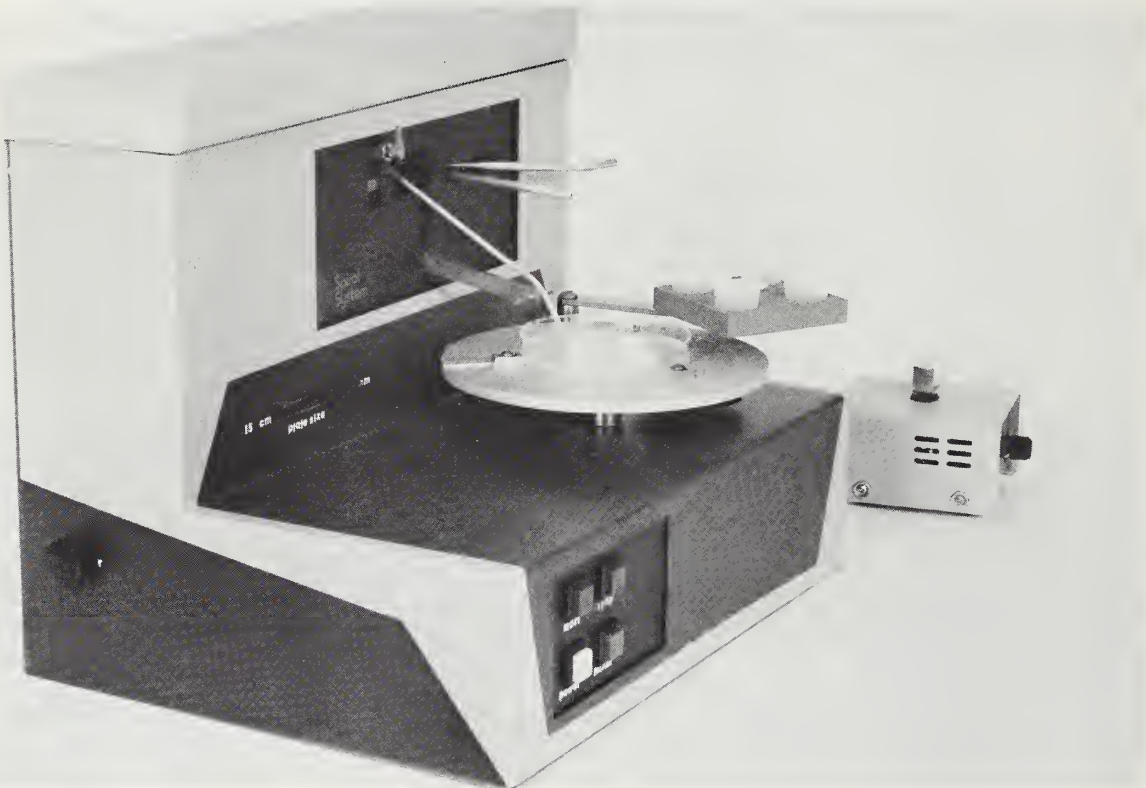
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NEW MEDICAL EQUIPMENT FOR FROZEN BLOOD -- Intended to make the use of frozen blood practical for even the smallest medical institution, this low-cost "Cytoglomerator" can reconstitute frozen blood at a rate of 3 units per hour. Its simple, compact design - engineered for maximum efficiency - works without pumps, centrifuges, logic circuitry, or other complicated parts. The firm also offers associated equipment for frozen blood programs. WRITE: Fred Balawin, Cryosan, Inc., Dept. CN, 53 Walter Street, Hyde Park, Massachusetts 02136 U.S.A.

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LASER UNIT FOR COUNTING BACTERIA COLONIES -- This electronically controlled laser beam scans and counts bacterial colonies on standard or spirally plated dishes. The laser offers high discrimination, simple operation, and repeatable results. Unique in its ability to count spiral plates. Suggested use: quality control labs for foods, drugs, cosmetics, etc. Priced from \$8,700 to \$11,000. WRITE: Samuel Schalkowsky, Spiral Systems Marketing, Limited, Dept. CN, 1200 Quince Orchard Boulevard, Gaithersburg, Maryland 20760 U.S.A.

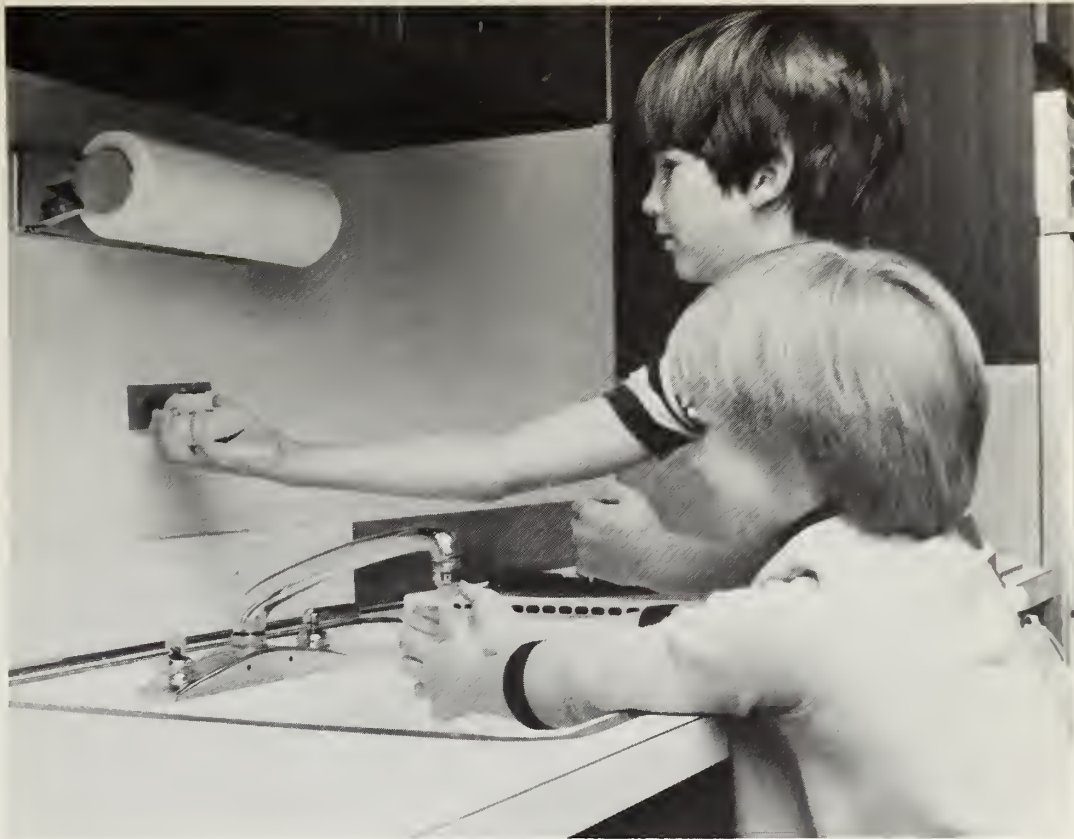
SPIRAL PLATING SYSTEM PREPARES MICROBE SAMPLES -- According to the firm, the "Spiral Plater" greatly reduces the cost of microbial assays while increasing laboratory productivity. In distributing microbe samples on petri dishes, the unit eliminates any need for serial dilutions and replicate plating; plating is done automatically for savings as high as 90 percent on assay costs. Priced from \$4,700. WRITE: Samuel Schalkowsky, Spiral Systems Marketing, Limited, Dept. CN, 1200 Quince Orchard Boulevard, Gaithersburg, Maryland 20760 U.S.A.



HOUSEWARES

(Including furniture, fixtures and appliances)

SHOWER VALVE CONSERVES WATER, HEATING FUEL -- Designed for all standard 1/2 in (8 cm) shower connections, the "Shower Water Valve" enables the user to stop the flow of water while soaping and scrubbing. Then, at the press of a button, the water turns on again - still at the correct pressure and temperature. The manufacturer says the unit should pay for itself in as little as 30 days. Saves 50 percent or more on water. Price is \$3.99. WRITE: Delbert V. Stitz, Hastin Enterprises, Dept. CN, P.O. Box 9868, Kansas City, Missouri 64134 U.S.A.



MAGNETIC SOAP HOLDER -- According to the manufacturer, the "Soap Caddy" eliminates the problem of wet, messy soap dishes. A rust-proof steel cap is pressed into a bar of soap for attraction to the holder's ceramic magnet. The "Soap Caddy", which adheres to any smooth surface, holds the soap suspended in the air to dry. The metal cap is said to remain smooth to the skin throughout use. Sells for 85¢ each. Distributor inquiries invited. WRITE: Jack Bikofsky, RMC Products, Inc., Dept. CN, 381 Elliot Street, Newton, Massachusetts 02164 U.S.A.

NEW DESIGN IN WALL HYDRANT/HOSE CONNECTIONS -- The manufacturer says the "Line-Gard" wall hydrant can help prevent pollution of potable water supplies by eliminating siphoning or back-flow of contaminated water caused by vacuums or negative pressures in the water line. If a vacuum occurs, a "vacuum breaker" seals off the water source, while air vents in the hydrant open to drain water in the unit. When the hydrant is closed, residual water automatically drains from the casing to prevent damage from freezing. Priced from \$40 to \$110. WRITE: A.W. Samuels, Jay R. Smith Manufacturing Company, Dept. CN, P.O. Box 727, Piscataway, New Jersey 08854 U.S.A.

WATER DISTILLER UNIT -- The stainless steel "Quench" distillation unit offers 6 gallons (22.8 l) of pure, safe water a day at very economical costs, according to this firm. One gallon (3.8 l) of water poured into the "Quench" automatically turns it on; after distillation, the unit turns itself off. Purified water collects in a stainless steel dispenser or any handy container. Electro-mechanical operation. Sold from \$250 to \$300. Agents, distributors, and licensees are sought. WRITE: Lawrence M. Levenstein, Terraqua, Inc., Dept. CN, 7342 Bolsa Avenue, Westminster, California 92683 U.S.A.

LABORATORY AND SCIENTIFIC INSTRUMENTS

PORTABLE CONDUCTIVITY METER -- Engineered for convenient field use, this solid-state conductivity meter also offers the option of AC/DC operation for laboratory use. The portable, battery-operated unit includes a rugged, corrosion-resistant housing, analog readout, and compact carrying case. Direct measurements, without calculations or balancing, are possible for pure water or solutions with twice the salinity of sea water. Suggested for environmental researchers, marine and soil scientists, etc. Sells for approximately \$250. Agents, distributors are sought. WRITE: Anthony P. Cassiano, Markson Science, Inc., Dept. CN, P.O. Box 767, Del Mar, California 92014 U.S.A.

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LAB REFRIGERATOR ELIMINATES USE OF DRY ICE, LIQUID NITROGEN -- This firm is introducing unobstructed stainless steel chambers, mechanically refrigerated to temperatures from +25 to -130 degrees C (+77 to -202 degrees F). Available in capacities of 4 and 8 liters (4.24 and 8.5 qts), the portable "Multi-Cool Systems" operate without dry ice or liquid nitrogen. The firm says they are the only laboratory cooling systems useful as storage chambers, low temperature baths, vacuum traps, or circulation systems. Priced at \$1,975. WRITE: Taylor N. Thompson, FTS Systems, Inc., Dept. CN, P.O. Box 158, Route 209, Stone Ridge, New York 12484 U.S.A.

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MARINE AND RELATED EQUIPMENT

MONITOR FOR EXHAUST TEMPERATURES IN DIESEL ENGINES -- A new digital instrument uses a microprocessor to monitor exhaust gas temperatures in the cylinders of marine and other diesel engines. The system continually scans as many as 32 cylinders, comparing temperatures against preset high and low limits. Engine damage from overheating is controlled and fuel efficiency is increased through better balancing of cylinders. Priced from approximately \$3,600 to \$5,300. WRITE: Donald J. Fox, Alnor Instrument Company, Dept. CN, 7301 North Caldwell Avenue, Niles, Illinois 60648 U.S.A.

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NEWLY DESIGNED STRAPS AND FASTENERS FOR BOATS -- This firm has designed 23 new products for marine use which are based on the self-adhering "Velcro" fastener. No knots are needed: press the straps together and they close instantly, pull and they open. These time-saving products include waterproof pouches, straps for securing gear, adhesive discs to hold small objects in place, etc. All items are waterproof, noncorrosive, and strong. Prices range from \$1.20 to \$11.50. WRITE: Robert I. Linden, Velcro International Limited, Dept. CN, 681 5th Avenue, New York, New York 10022 U.S.A.

METALWORKING AND FINISHING

CONCENTRATED HYDROCHLORIC SOLUTION -- A concentrated "Master Hydrochloric Solution," prepared from alluvial soil concentrates, is formulated for simplicity of use, for the convenience of firms processing heavy metals such as any of the platinum group, gold, silver, etc. Selling for \$150 to \$300 per gallon, this concentrate offers significant savings of production costs to precious metal refineries. WRITE: E.L. Purington, Mutual Metals, Inc., Dept. CN, 18194 Marygold Avenue, Bloomington, California 92316 U.S.A.

HEAVY-DUTY REEL SENSOR FOR STEEL MILLS -- Designed to replace expensive "rack and pinion" gear drives, this "Heavy-Duty Reel Sensor" has applications in steel mills requiring a rugged sensor for harsh environments. The unit can be equipped with the following built-in transducers: pulse encoders, limit switches, absolute encoders, tachometers, geared potentiometers, synchro/revolvers. Price range is \$1,000 - \$2,000. WRITE: Eric T. Carlen, Nord Instruments Company, Inc., Dept. CN, 5457 JAE Valley Road, Roanoke, Virginia 24014 U.S.A.

DIGITAL DISPLAY FOR MACHINE TOOLS -- "Digital Dial" is an electronic digital readout display designed to replace mechanical dials on milling machines and other machine tools. Both English and Metric measurements can be obtained for precise control of jobs requiring close tolerances. Efficiency and production increase, the firm says, while costs are reduced. Price: \$325. WRITE: Richard T. Bellis, Instruments Only Inc., Dept. CN, 3198 "C" Airport Loop Drive, Costa Mesa, California 92626 U.S.A.

MACHINERY FOR BENDING METAL WIRE, TUBES, ETC. -- This is precision production equipment for bending metal wire, rods, tubing, strip metal, and structural shapes for various industries. The "Solid Center Post Rotary Bender" can bend metal up to 400 degrees (for ovals, "U" curves, scrolls, "S" shapes, etc.) or form sharp, square corners. Used in making wrought iron products, automobiles, wire baskets, etc. Hydraulic or pneumatic operation possible. Sells for \$3,200 and up. WRITE: S. Varady, Carbide Industries Manufacturing Corporation, Dept. CN, 603 Dean Street, Brooklyn, New York 11238 U.S.A.

PRODUCTION

(Specialized Machinery and Equipment)

AUTOMATIC INSTALLER UNIT FOR O-RINGS, OTHER SEALS -- The manufacturer says this automatic machine can position and install O-rings, gaskets and similar seals of almost any size, shape, or material at production rates up to 8 times as high as conventional methods. As many as 3,000 rubber or semi-resilient plastic seals can be installed per hour. Prices start at \$6,800. WRITE: John A. Carver, Apple Rubber Products, Inc., Dept. CN, 26 West Spring Street, Buffalo, New York 14221. U.S.A.

HEAVY-DUTY INDUSTRIAL TIRES -- "Ace Heavy Duty Wheels" are semi-pneumatic rubber tires mounted on tough wheel centers for the most punishing industrial use. The manufacturer says they are puncture and rust-proof, tougher and more attractive than steel wheels. The centers will not chip, peel, or fade in color. Manufacturers of wheel barrows, hand trucks, small garden tractors, and other equipment will find "Ace Wheels" in a number of sizes suited to their needs. Price is \$1.75 to \$4.75. Agent and distributor inquiries welcome. WRITE: Rene M. Petrognani, Amerace Corporation, Wheel Products Division, Dept. CN, Ace Road, Butler, New Jersey 07405 U.S.A.

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SAFETY AND SECURITY EQUIPMENT

MEASURING DEVICE FOR FRICTION OF ROAD SURFACES -- This is a light-weight, portable measuring unit designed to determine the coefficient of friction for road surfaces, floors, sidewalks, etc. A special attachment also permits measurement of road distances. Police, insurance investigators, and others will use the "Drag Sled Friction-Distance Finder" to determine vehicle speeds from skid marks at accident scenes. Highway engineers will find it useful for designing safe highways, sidewalks, etc. Sells for under \$280.

WRITE: Robert W. Broshears, J.L. Broshears, Inc., Dept. CN, 8020 N.W. Holly Road, Bremerton, Washington 98310 U.S.A.



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FIRE DETECTOR/ALARM SYSTEM -- No cleaning, no maintenance is needed for the "UT-315 Smoke Detector" and "UT-417 Fire Alarm Control Panel", according to this firm. In addition, the smoke detector operates on only 20 microamps of power, permitting use of smaller standby batteries and wire sizes in case of power failure. The detector is priced at \$30. The Alarm Control Panel, used with the detectors, sells for \$135. Agents and distributors are sought.

WRITE: R.P. Kirwan, Unitec, Inc., Dept. CN, 3910 S. Mariposa, Englewood, Colorado 80110 U.S.A.

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SAFETY LIGHTING SYSTEM -- The "Lumenette Model ML-7" is a miniature self-contained lighting system featuring a high-capacity charger and a battery able to power up to seven lights and illuminated exit signs. Low cost and compact, attractive design help make the "Lumenette" ideal for schools, hospitals, stores, factories, etc. Priced from \$100 - \$150. The company is seeking agents and distributors. WRITE: Arthur S. Lefkowitz, J. Gerber and Company, Inc., Dept. CN, 855 Avenue of the Americas, New York, New York 10001 U.S.A.

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SPORTS, RECREATION AND HOBBIES

CAMPERS WITH EXPANDABLE TOPS -- This firm custom builds campers with expandable tops to fit European, Japanese, and American four-wheel drive vehicles. The camper's low profile (ideal for safe, easy transportation) quickly expands to full height for comfortable camping. Standard equipment: 9,000 BTU furnace, storage tanks for water and propane, stainless steel sink, hand pump, 2-burner stove, etc. Sleeping room for four adults. Price range is \$ 1,795 - \$2,700 F.O.B. Denver, Colorado. Distributor inquiries sought. WRITE: H. Joe Shimpfky, Four Wheel Campers, Inc., Dept. CN, 2890 W. 62nd Avenue, Denver, Colorado 80221 U.S.A.



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NEW GAME TESTS FOR EXTRASENSORY PERCEPTION (ESP) -- Based on actual tests used by scientists to study extrasensory perception, this game uses simple, well-known symbols (circle, square, cross, man, house, etc.) to measure players' ESP ability. Players concentrate on symbols, trying to communicate them telepathically. The "ESP Game" contains two sets of symbol cards, scoreboard, pencil, and instructions for use. An ESP glossary, vocabulary test, and special puzzle are also included. Sells from \$4.50 to \$6.00. WRITE: Glenn M. Alexander, Parapsychological Research and Development Company, Dept. CN, 2650 North Lakeview, Chicago, Illinois 60614 U.S.A.



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NEW IDEA IN "CATCH AND THROW" BALL GAMES -- "Fenderball", an exciting new indoor/outdoor ball game for children and adults, consists of a soft polyethylene ball and long, curved "fender-shaped" racquets. These racquets allow players to "catch" the ball without stopping its motion and to curve its flight back towards the other game participants with a flick of the arm. Each "Fenderball" set retails for \$7. WRITE: Vicki Himmelstein, Schwab Wells and Maltz, Inc., Dept. CN, 208 West 8th Street, Los Angeles, California 90014 U.S.A.

NOVELTY DISC CHANGES COLOR WHEN TILTED OR TOUCHED -- The "Fidgit Magic Color Disc" is an intriguing novelty that will change its bright, fluid colors at the touch of a finger. Useful as a key holder, pendant, toy, or conversation piece, the "Fidgit" also changes colors when tilted. Available in round or octagonal disc shapes. Sells for \$1.60 and under. Distributors, agents sought. WRITE: Stan Durham, Athol-Research Company, Dept. CN, 200 5th Avenue, New York, New York 10010 U.S.A.

NEW UNIT AIDS RECORD PLAYER PERFORMANCE -- The "DiscTraker", a new accessory for record players, significantly reduces resonance in the tone arm and cartridge produced by low frequency sounds as well as resonance caused by warped records. The manufacturer says the unit permits even badly warped records to be played with fidelity and without record wear or damage to the stylus. Retail price is \$29.95. WRITE: Ms. Sherry L. Taylor, International Audio Sales, Inc., Dept. CN, 1407 North Providence Road, Columbia, Missouri 65201 U.S.A.

SPLIT BED SNOWMOBILE TRAILER -- This snowmobile trailer features a split bed for easier loading and unloading. Each half of the bed accommodates a large snowmobile and can be tilted independently of the other ramp for more convenient handling of either vehicle. Suggested for sportsmen, forest services, rescue units, etc. Price is \$700. WRITE: Dean Clark, Chair-E-Yacht, Inc., Dept. CN, P.O. Box 231, Shoshoni, Wyoming 82649 U.S.A.



LICENSING AND INVESTMENT PROPOSALS

COMPACT FOLDING OUTDOOR FURNITURE -- Manufacturing and marketing rights offered for new outdoor furniture that folds into a compact "stick" configuration with one simple motion. According to the company, these are the most compact, comfortable, and convenient designs available anywhere. Two patents involved. One patent issued in U.S.A. with foreign patents pending. Other patent pending in U.S.A. and foreign patents will be sought. WRITE: Mr. Mervyn M. Watkins, President, Convaid Company, Dept. CN, P.O. Box 2731, Rancho Palos Verdes, California 90274 U.S.A.

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DISPOSABLE PLASTIC MEDICAL PRODUCTS - Seeks foreign partners or licensees to establish fully-integrated manufacturing facility capable of producing disposable medical plastic products and associated sterile solutions. Products include plastic tubing sets and filled flexible containers for the administration of parenteral fluids and the delivery of medication; and for the administration, collection and storage of blood and blood fractions. This technology is also basic to the manufacture of other widely used medical devices in urology, anesthesiology, cardiology and respiratory care. The proposed facility would include extrusion of film and tubing, injection molding of components, manufacture and assembly of sets and containers and manufacture of sterile intravenous and blood preservative solutions. WRITE: Dr. James F. Marten, Delka Corporation, Dept. CN, 189 Wells Avenue, Newton, Massachusetts 02159 U.S.A.

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IMPROVED UMBRELLA BABY STROLLER -- Manufacturing and marketing rights offered for new, improved folding baby stroller that folds to a compact "stick" configuration with one simple motion. The firm says this is the sturdiest and lowest cost design available. Product currently manufactured in the U.S.A. where patent is issued. Foreign patents pending. WRITE: Mr. Mervyn M. Watkins, President, Convaid Company, Dept. CN, P.O. Box 2731, Rancho Palos Verdes, California 90274 U.S.A.

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TRACTOR CABS - Industrial Cab Company specializes in high quality sheet metal fabrication of tractor cabs for industrial and construction equipment. The company manufactures cab enclosures from three facilities in the United States and Canada that meet and/or exceed S.A.E. roll over protection standards. Our recently introduced crawler dozer power-angle-tilt blade represents the company's plan for diversification of products line. Industrial Cab Company has been manufacturing for 27 years and is recognized as an innovator in the cab enclosure industry. Firm seeks foreign licensees to produce and market its cabs and blades. WRITE: Mr. T. L. Fenn, Sales Manager, Industrial Cab Company, Inc., Dept. CN, Western Avenue, Essex, Massachusetts 01929 U.S.A.

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SEPARATION SYSTEM FOR MINERALS AND SOLID WASTES - Seeks licensees for MTU#7003, a unique heavy-media separation system for minerals and solid wastes. Heavy-media suspensions, having improved stability and the capability of providing more efficient and accurate separation than conventional clay-supported suspensions, are made by using water-soluble polymers as the primary stabilizing additive. Widely applicable to the minerals industry for separation of iron, copper, zinc and other ores; coal; diamonds; gravel; copper slag; and such solid waste minerals as incinerator slag, and shredded scrap metal, glass and plastics. Patent protection in the U.S., Canada, U.K., U.S.S.R., Australia. WRITE: Mr. Thomas P. Evans, Director of Research, Michigan Technological University, Dept. CN, Houghton, Michigan 49931 U.S.A.

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IRON ORE PELLETIZING PROCESS - Seeks licensees for PELLETECHTM, a low-temperature iron ore pelletizing process (MTU#6600). This process offers potential energy savings of 30-50% in producing iron pellets for blast furnaces. Iron ore, ore concentrates, and steel plant wastes (BOF dust, mill scale fines, chamber dust, sludge and filter cake) can be turned into high strength pellets very economically. Low temperature steam and inexpensive additives are the key to the process. Steel plant waste recycling is easily and cleanly accomplished with substantial economy. The process is also useful for the production of metallized pellets and for pelletizing other hard-to-handle materials such as fly ash. Patent protection in the U.S. and in most industrialized countries. WRITE: Mr. Thomas P. Evans, Director of Research, Michigan Technological University, Dept. CN, Houghton, Michigan 49931 U.S.A.

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eral Office Bldg., 26 Federal Plaza, Foley Sq. (212) 264-0634.

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